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Using Google Applications As Part Of Cloud Computing To Improve Knowledge And Teaching Skills Of Faculty Members At The University Of Bisha, Bisha, Saudi Arabia

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USING GOOGLE APPLICATIONS AS PART OF CLOUD COMPUTING TO IMPROVE KNOWLEDGE AND TEACHING SKILLS OF FACULTY MEMBERS AT THE UNIVERSITY OF BISHA, BISHA, SAUDI ARABIA

by

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DEDICATION

This work is dedicated to my beloved Mother, Ante, and my Wife and my Sisters who never stopped praying for me. Thank you for your patience, support and prayers. It is also dedicated to my princess Weeam, Junior Professor Abdullah, my genius assistant Jawad, and my sweet little heart Wesal - May Allah bless all of you with the highest stage of paradise.

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CHAPTER 1: PROBLEM STATEMENT

Introduction

Our recent decade shows that the world is changing rapidly and faster than ever due to technological developments which bring new methods, concepts, and techniques to learning, teaching, training and, self-improvement, in particular. In addition, this change introduces numerous new terms such as Cloud computing, social media and a huge revolution of mobile and web applications we never before experienced. The list of new applications is endless. Cloud computing has grown significantly over the last 5 years and is now referred to on a daily basis. Moreover, it becomes heavily promoted by the Information Technology (IT) industry as a new paradigm for different organizations of diverse sizes to use in managing and organizing their business and IT resources (Tan & Kim, 2011).

Scholars identify the potential benefits as well as risks in applying Cloud computing technologies (Tan & Kim, 2011). Thus some associate it with enhanced flexibility; others with security concerns. A study by McKinsey identifies more than twenty possible definitions of Cloud computing (Sultan, 2010). In fact, there is no specific definition or standard for Cloud computing (Grossman, 2009 and Voas & Zhang, 2009).

The definition from the National Institute of Standards and Technology Information Technology Laboratory (NIST), is the more frequently used definition which describes this type of technology. NIST says "Cloud computing is a model for enabling convenient, no-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. This cloud model promotes availability and is composed of five essential characteristics, three service models, and four deployment models"

(Mell & Grance, 2009, p. 6). This current definition has been published after 15 revisions and years of work and 15 drafts (Mell & Grance, 2009).

More generally, Cloud computing refers to any services delivered over the Internet. If you use Gmail for email or Dropbox for file sharing, you are using Cloud services (Cloudtime.org, n.d.). Furthermore, Cloud computing has a significant place in higher education in that the appropriate use of Cloud computing tools can enhance engagement among students, educators, and researchers in a cost effective manner (Mircea & Andreescu, 2011). While there are some security concerns mentioned by experts in this field, they do not overshadow the benefits. (Wyld, 2009).

Nowadays, Cloud computing has become a significant element of the educational system that integrates mobile learning, distance learning, or any type of Learning Management System (LMS) as part of that in its education method (Pocatilu, Alecu, & Vetrici, 2009; Rao, Sasidhar, & Kumar, 2010; Aldrich, 2010; Cahill, 2011; Behrend, Wiebe, London, & Johnson, 2011), because Cloud computing gives all students, researchers, lecturers, and administrative staff in the educational system the access to the services provided by new computing paradigms, including Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) (Sultan, 2010).

Google application (Apps), in particular, is discussed later in this study in more detail as a popular SaaS that is adopted by a number of educational systems especially in higher education (see Sultan, 2010; Cahill, 2011; Round, 2011; Taylor & Hunsinger, 2011; Thomas, 2011; Bonham, 2011; Denton, 2012; Li & Chang, 2012).

Most institutions are applying, at least one of three different ways to use Cloud computing (Cahill, 2011). First, a number of these institutions get Cloud computing services

from third parties or public clouds by purchasing the space they need on the third party server (Gray, 2010; Klug & Bai, 2015; Sheard, 2010) which usually includes the technical support, back-up data as well as the information security. Second, other institutions form together consortiums to build cloud computing infrastructure prototypes or community clouds by getting help from their governments that are investing in shared cloud infrastructures for mutable purposes (Cappos, Beschastnikh, Krishnamurthy, & Anderson, 2009; Khmelevsky & Voytenko, 2010).

Last, but not least, few institutions own their Cloud computing services by creating everything from A to Z (Doelitzscher, Sulistio, Reich, Kuijs, & Wolf, 2011; Schaffer, Averitt, Holt, Peeler, Sills, & Vouk, 2009), and have the full control on the server that has their data. This method is more secure, but it needs a specialized team capable (financially and scientifically) to manage and protect these data all the time, which often is unavailable in many institutions.

From another perspective, the term Social Media is bigger and broader in scope. Social Media in general is a virtual community as the Pearson Learning Solutions and Babson Survey Research Group [PLSBSR] defines it (Seaman, & Tinti-Kane, 2013). Another view sees Social Media as "A community of people sharing common interests, experiences, ideas, and feelings over the Internet or other online collaborative networks." (Seaman & Tinti-Kane, 2013, p. 40). Virtual communities take on different forms and may leverage social media, forums, and blogs (Seaman & Tinti-Kane, 2013). The examples are endless including LinkedIn, Google+, Facebook, Twitter, Message Boards, Chat Rooms, or Users Group

Cloud computing and Social Media are connected to each other tangibly and benefit from each other in many different ways, which makes both of them seen as two sides of the same coin. Some business companies emphasize their job on Cloud computing (like Box, Dropbox, Google

Drive, etc.) by sharing resources, organizing data, or even saving documents. Other companies emphasize Social Media services promoting, marketing and branding their products as well as customers and keeping in touch with them. Just a few companies and organizations around the world provide both Cloud computing and Social Media services and fit under a unique umbrella group like Google. Google also has tough competitors like Apple and Microsoft.

Having said that, when the topic comes to a "new technology" and how to integrate it into the educational system, most of the time, the discussion goes beyond the usage of that technology and how beneficial it could be for students and professional learners. Personalized learning is always on the rise for learners in every learning environment. Redesigned educational systems include personal learning plans, playlists of content tailored to fit each learner, adaptive curricula, and access to learning anytime and anywhere.

Some educators who are interested in integrating new technology into the educational system, look at this new technology from another wide angle, and raise questions on how to use this technology to improve instructors' skills. This sight, from my perspective, will lead ultimately to major developments in the learning process and definitely will be much more advantageous and appropriate. Training is a critical tool in building instructors' knowledge and a great way to elevate and empower teaching skills too. While it takes many forms, and exists in a variety of venues, training is essential in order to foster an institution's vision, and maintain a competitive edge in the educational field. While much emphasis is placed on the learners in their role as students the question here is what about the instructors?

Definitely not all instructors have the same ability or the interest in using technology in their personal learning or in integrating it into academic teaching for a couple reasons. One of the reasons is related to the lack of training when they need it the most. However, the research

studies show that the Constructivist theory helps those learners, as adult instructors, tremendously. This theory appeared when many educational psychologists were more concerned with what was going on inside the human brain than how to get in. Dewey (1916), Piaget (1973), Vygotsky (1978) and Bruner (a.1996), Burner (b.1996) each proposed that learners could learn actively and construct new knowledge based on their prior knowledge. In these perspectives, the role of instructor is a facilitator (Ornstein and Hunkins, 1998).

For Dewey (1916), a situation represents the experiences of the environment affecting the learner, and interaction takes place between the learner and his or her environment. So, knowledge is based on active experience. However. Piaget and Dewey each believed that the educator's role involves the shaping of learners' real experience from the environment, and knowing what surroundings tend to promote experiences that lead to growth (Ornstein and Hunkins. 1998).

Dewey (1916) considered that the main function of education was to improve the reasoning process. He also recommended adapting his problem-solving method to many subjects. A student who is not motivated will not really perceive a problem, so problems selected for study should be derived from learner interests (Ornstein and Hunkins. 1998). Therefore. the methods of Constructivism emphasize development of learners' ability in solving their real life problems. As a result, problem solving and free discovery come together. In other words. knowledge is dynamic and is built around the process of discovery (Dewey. 1916). Dewey considered the teacher as a guide rather than a director since learning allowed for creative interaction with the teacher rather than outcome-based teaching.

Vygotsky placed more emphasis on the social context of learning. Vygotskian theory emphasizes the importance of the socio-cultural context in which learning takes place and how

the context has an impact on what is learned (Vygotsky, 1978). Since Vygotsky emphasized the critical importance of interaction with people, including other learners and teachers, in cognitive development his theory is called "Social Constructivism" (Maddux, Johnson and WVillis, 1997). Much of collaborative problem solving strategy is built on Vygotsky's best known idea, the zone of proximal development (ZPD). Therefore, this study is designed to benefit from these theoretical constructs and appreciate their contributions to the learning target population.

Many researchers have targeted the same goal with some similarities, but this study's population has multiple differences starting from the language, the level of education, and, last but not least, the authenticity of the subject. This study takes place in Saudi Arabia at The University of Bisha. It is the first study that attempts to explore the experiences of faculty members with Google Apps in a Constructivist environment.

The Kingdom of Saudi Arabia is located in the far southwest of the continent of Asia and Saudi Arabia occupies the bulk of the Arabian Peninsula, an area of 2,149,790 square kilometers which equals 830,038.6 square miles from the heart of The Middle East. The Middle East, stretches from Iraq through the Arabian peninsula and along the north coast of Africa. It has for centuries been the crossroads where West and East have met (Marie-Joelle, 2011). Arabs had and still have successfully traded between the two sides of the world, buying and selling the goods from other countries, as well as their own. Arabic Language and their culture are unifying factors that connected to the Islam religion. These three factors provide a body of belief and a strong sense of identity and community (Marie-Joelle, 2011). Islam spread in the seventh century and along with it the Arab language, which had once been a tribal language in the Arab peninsula. Family ties bring security but also commitments not just for parents and siblings but also uncles, nephews or cousins if the interests of the clan as a whole are better served (Marie-Joelle, 2011).

The family in The Middle East is run in a disciplined way by the father who is considered as the leader (Marie-Joelle, 2011).

Keeping face is often referred to with regard to Arab society and is related to the question of reputation. Admiration and respect are sought after as much as, if not more than, financial success. The face or image conveyed to others, especially in public, is therefore given considerable attention, even when this involves dealing with relative strangers. The Arabs are renowned for their generosity and hospitality, but these 'duties' may also be a prelude to seeking some kind of commitment or request. As part of this culture, it is worthwhile to mention that the phrase 'Insh-Alah', is translated as 'God willing' or 'if Allah so wishes', is one often used in everyday conversation and reflects deep-rooted beliefs in pre-destination and fatalism.

Its use also emphasizes the extreme sensitivity shown to the context of any discussion. Its exact meaning depends on the subject in hand, the particular purpose of the discussion, and the relationships between the individuals involved. On some occasions, it can mean 'yes', sometimes it can mean 'I'll arrange it', other times, 'Done! Don't discuss this further' (Marie-Joelle, 2011).

However, the door is now wide open in many parts of the Middle East, and aspects of Western culture have made their way into many Arab countries. More and more Middle Easterners are also participating in management education programs in the West and applying the knowledge and skills to their native business environment as well (Marie-Joelle, 2011).

According to The Higher Education Statistics Center in Saudi Arabia, the number of students who are in public colleges and universities in the last available report (2013-2014) is 1,662,923 male and female students. There are 355,442 freshmen students, and 1,307,481 registered students with 63,363 faculty members who work in 30 public universities (HESC, n. d., August, 4th). Generally, the educational system policy in Saudi Arabia decrees that a single-

sex education is mandatory in all levels of the system including higher education due to religious and social concerns (Alanazy, 2011); however, there are some exceptions with specific institutions and fields. In addition, The Saudi Arabian Government believes that having students undertake study at leading international universities is a key pillar underpinning the development of an international standard workforce for the Kingdom. North America (Canada and the USA) has been the major destination for Saudi students wishing to study abroad for many decades. Indeed, over 60%, approximately 110000 students, of all Saudi students currently studying at universities outside the Kingdom are studying in North America since The King Abdullah Scholarship Program (KASP) was introduced in 2005 (Abouammoh, Smith & Duwais, 2014).

The University of Bisha (UoB) is located in the southern region of the Kingdom of Saudi Arabia. It takes its name from Bisha city which is one of the oldest cities in The Arabian Peninsula as well as the Asir territory. The university has been established by the order of The King Abdullah bin Abdulaziz Al-Saud in April 3rd, 2014 (corresponding to 2nd Jumada II, 1435 hd.) and it includes 13 colleges that are distributed in five provinces (Bisha, Al-Namas, Balgarn «Sabtu-Alalyah» and Tathleeth) with about 600 faculty members who deliver their knowledge and other academic services to more than 16000 students.

The history of higher education in Bisha started when a decision of The Ministry of Education (The Ministry of Higher Education previously) created a Medium College of Teachers in 1986 (1407 hd.), then it evolved into Teachers' College 1991 (1412 hd.) that graduated many teachers in a number of disciplines and academic departments including Quranic studies, Islamic studies, Arabic language, Mathematics, Science, Art education, Physical education, Computer, and English. The aim of the college was to graduate teachers who are capable to teach in elementary school.

In 2003, the decision of The Ministry of Education to establish a community college in Bisha has been made to offer diplomas and to meet the society's needs of academic disciplines. This Community College was under the supervision of King Khalid University (KKU) because it was the closest university in the region at that time. Four years later, in 2007, King Khalid University established the College of Arts and Sciences in Bisha, which includes a range of departments including: English, Medical Sciences, Physics, Chemistry, Biology, Mathematics and Computer Science.

Shortly afterwards, Teachers' College annexed to KKU in 2008 by a decision of The Higher Education Council. A resolution was issued for the restructuring of teachers' colleges and faculties for Girls around the Kingdom of Saudi Arabia and attach them to the closest university at the same district in order to organize and improve the system of higher education in the country.

Consequently, KKU inaugurated a management of colleges in Bisha in 2008 for all colleges' of boys and girls in Bisha and its provinces (Balgarn and Tathleeth), and I was hired as the first supervisor of that management for approximately 21 months before I had received my scholarship and left the country to come to USA in August 2009.

In 2010, the resolution of establishing the faculties of Medicine and Engineering was issued by KKU to become the total faculties of KKU branch in Bisha under this resolution (13) College. In the second of the month of Jumada II that corresponds to April 2014 the custodian of the two holy mosques King Abdullah bin Abdulaziz Al-Saud - may God have mercy on him - ordered the transfer of King Khalid University's branch in Bisha and neighboring provinces to become an independent university called "University of Bisha (UoB)" based on the Higher Education Council in its resolution 72.

It is noteworthy that while The UoB has become an independent university since 2014/1235 hd., it still gets its electronic services and other technical support as well as some other service contracts from KKU (SABQ, 2014) since the president of KKU, Prof. Abdull-Rahman bin Hamad Al-Daoud, remained as the president on behalf of The UoB until Thursday, June 24, 2016 when The King of Saudi Arabia Salman bin Abdulaziz Al Saud, Custodian of the Two Holy Mosques, ordered Dr. Ahmad Hamed Naqadie to undertake the tasks as president of UoB since he was the Vice-President of King Abdullaziz University and is one of the successful leaders (WAS, 2016).

Purpose of the Study

Throughout the years, it has gotten to be progressively critical for those of us working in advanced education to investigate the energizing open doors new advancements convey to foundations, instructors and learners (Seaman & Tinti-Kane, 2013). Many advances in learning technologies are taking place throughout the world; these advances offer a range of tools and new opportunities to enhance teaching and learning by enabling individuals to personalize their environments in which they work and learn (Whitehead, Jenson, & Boschee, 2013). There is growing acceptance of virtualization and Cloud computing today across the world to meet the rapidly changing economic needs, and improve service delivery.

On one hand, a clear trend in higher education is the growing use of instructional technology tools that can help instructors meet the needs of students and facilitate the teaching process (Cordova, 2012). Many educational institutions including colleges and universities around the world are implementing Cloud computing services and resources into their learning system in order to benefit from its availability, scalability, interoperability, security, mobility, and end user satisfaction in the use of software applications and other computing resources (Cahill,

2011). However, some institutions are not taking advantage of the services offered by the Cloud computing paradigm (Cahill, 2011).

As a result, higher education institutions face the challenge of training their faculty to make a shift from teaching in traditional to virtual environments (McGee-Swope, 2010). Specially those who desire to teach online courses and aspire to provide very good quality, need training in both technology and instructional methods such as course design (Hoyle, 2010), implementation, and delivery (Dempsey, Fisher, Wright, & Anderton, 2008). These are just examples for skills that are unambiguously needed into the e-learning environment (Hoekstra, 2013). Furthermore, the training, on technology and instructional methods, could be considered as challenges for faculty. Those challenges need to be examined, clarified, and addressed in order to ensure the best possible learning environment for everyone involved (Thomason & Margaret, 2009).

"Some instructors are embracing technology wholeheartedly, while others feel skeptical or left behind" (McKeachie & Svinicki, 2013, p. 232). The realty is that this technology brings a modern education approach to learning whether or not it is fully embraced by faculties. The issue for most university professors is teaching technology skills in classes where technology is not the focus; however, it is essential to incorporate technology in course content (Llorens, Bayona, Gomez, & Sanguino, 2010). Professors who do not have time or space within the current curriculum to add new courses should incorporate technology skills within existing courses (Cahill, 2014) to meet their students' academic needs in all content areas.

With diversified tools and services that are provided online by a number of public and private organizations such as the Google company, faculty members have a tremendous

opportunity to build a self growing and unit sharing virtual environment for teaching and learning (Al-Zoube, 2009) in order to elevate their teaching abilities.

This issue guided me to study how faculty members in higher education and in Saudi Arabia specifically benefit from Cloud computing services using Google Apps, in general, and in subject matter and teaching improvement, in particular. The study addresses how faculty use Google services and its Apps to improve knowledge of their discipline and teaching skills, by training themselves and participating with each other practically via Google Apps Internet network to achieve a satisfactory level of improvement. The results of this research will clarify the vision and assist the Ministry of Education, in general, and Higher Education institutions, in particular, in realizing that more focus needs to be developed on communication, collaboration, and collaborative technology skills.

It also matches with "Saudi Vision 2030" that was announced April 25th, 2016 by The Deputy Crown Prince Mohammad bin Salman bin Abdelaziz Al-Saud, the Chairman of The Council of Economic & Development Affairs. The Saudi Vision 2030 "goes beyond replenishing sources of income that have weakened or preserving what we have already achieved" (Saudi Vision 2030, 2016).

Prince Mohammad states that "We are determined to build a thriving country in which all citizens can fulfill their dreams, hopes and ambitions. Therefore, we will not rest until our nation is a leader in providing opportunities for all through education and training, and high quality services such as employment initiatives, health, housing, and entertainment" ("Saudi Vision 2030", 2016). He clearly points out that " We commit ourselves to providing world-class government services which effectively and efficiently meet the needs of our citizens." ("Saudi Vision 2030", 2016).

In education commitments, particular, the goals of "Saudi Vision 2030" go beyond the Arabic nation and looks forward to be on of the best 200 international universities in year 2030. The students will be able to make internationally advanced results and get the advanced classifications under the global indicators of educational attainment. Saudi Arabia will achieve this through the development of an advanced educational curriculum that will be focused on basic skills in addition to developing talent and character building as well as strengthening the role of teachers and the lifting of prequalified. (Rashad, 2016).

The results of this study will also help the decision-makers in non-profit organizations and institutions that operate on restricted budgets as well (Unger, 2012). The results will also assist colleges, universities, and other training institutions in deciding if they desire to implement Google Apps (Education Edition) or adapt other collaborative technology that are similar.

Study Variables

A few years ago we could define “Google” as a powerful search engine only. However, that was not the ultimate goal for Google which offers today numerous web applications, smart phones Apps, navigation system, and operating systems as well as cloud services that help users improve collaboration in several ways. Google Apps, in particular, have been increasing internationally for the past decade, and more and more K-12 schools, universities and businesses are incorporating them into their everyday practices. Google has built a web-based e-learning system that utilizes various social tools, smart agents, and interactive environments of Web 2.0 and then makes them available in cloud (Al-Zoube, 2009); (Brabazon, 2012).

Yet, Google’s newest mobile application for time management and goal settling is “Personal Life Goal Coach” (Adhikari, 2016). It brings the machine intelligence into user’s calendar to help them find the best time to fulfill, or finalize extra aims and make the most of

their time specially if they use Google calendar app periodically. This app interacts with users' daily schedule based on their reactions then motivates them to accomplish their goals that were set up previously (Adhikari, 2016).

Accordingly, Google defines its "Apps" as: a core suite of productivity applications that Google company provides for free to educational institutions and non-profit organizations to use for academic purposes (Miller, 2009). Research shows a huge rise in usage of Google Apps in education including Google Scholar, Google Docs, Google+ Plus, Google Drive, Google Classroom, Google Translator and YouTube as a part of its services. (Brabazon, 2012). More than 50 million students, teachers and administrators around the world are using Google Apps Education suite and benefit from them every day (Mohr, 2015).

Therefore, the tools that will be investigated in this research are Google Drive including (Docs, Sheets and Slides), Google Forms, Google Scholar, Google Translator, Google+ (including Google Hangouts), Google Classroom, Google Sites and YouTube.

Google Drive is a document stockpiling and synchronization administration made and overseen by Google (Brabazon, 2012). It was launched on April 24, 2012 and had 240 million monthly active users as of October 2014 (Brabazon, 2012). With Google Drive users could collaboratively create a new document, edit a previous one or even the current one simultaneously, share documents and/or write their own comments too.

The same ability is available into Slides, Sheets and Drawings as well (Miller, 2009). Numbers of users have the ability to work on their document at the same time, and everyone has full ability to edit the file as different changes occur in real-time (Yee, & Hargis, 2011). Users can access their files from any computer with Internet connection and a web browser; moreover,

the files that shared publicly on Google Drive can be searched with web search engines. (Teräs & Teräs, 2012)

Google Docs is used for different types of collaborative writing, from brainstorming to finishing a polished written product (Brabazon, 2012). Moreover, it could be used for drawing ideas to gradually building a shared understanding of the subject (Yee, & Hargis, 2011). The commenting tool of Google Docs enables discussion embedded in the creation process and allows for multiple perspectives, reflection and articulation. (Zhou, Simpson & Domizi, 2012).

Google Forms is another feature that allows users to plan events, make a survey or poll, give students a quiz, or collect other information in an easy, streamlined way (Teräs & Teräs, 2012). Users can also create a form from Google Drive or from an existing spreadsheet that can record the responses to the form.

Google Scholar is a freely accessible search engine that permits users to look for both physical and digital copies of articles (Jacsó, 2005). It searches a wide variety of sources, including academic publishers, universities, and preprint depositories looking for peer-reviewed articles, theses, etc. (Jacsó, 2005).

Google Translator is one of the oldest toolkit resources that Google published years ago. It is a web application designed to allow translators to edit the translations that Google Translate automatically generates. With the Google Translator Toolkit, translators can organize their work and use shared translations, glossaries and translation memories. (García, & Stevenson, 2009).

Google+ is the Google's new social media platform that established and published publicly in September 2011 (Yee, & Hargis, 2011). It is a fairly standard social networking site, where users add friends and see a stream of their news and posts (Ovadia, 2011). Google+ is useful for educators who share interest in the same topic or subject, because Google+ gives them

the ability create their own groups and share thoughts, articles, multimedia and files with their friends which Google+ refers to as circles (Ovadia, 2011). Circle members can share their status or stream video conference or update their pictures, personal videos, links and location if needed. (Teräs & Teräs, 2012).

Circles are ways to arrange users' contacts within Google+. Once someone is in a user's circle, that person can easily be allowed to see certain content, or be restricted from seeing it (Ovadia, 2011). This way the users can share content relevant to only these people in these circles and no other. Google+ is similar to Twitter in that anybody can review a given user's posts (Yee, & Hargis, 2011). The advantage of Google+ and Twitter is the possibility to add discussion to all the shared items (Miller, 2009).

Google+ is also used for following outside experts and networking with experts and colleagues from different parts of the world. (Teräs & Teräs, 2012). There is no immediate friend relationship needed, though, to peruse the posts composed by others. They give an unequivocal hierarchical structure, contrasted with the more subtle posting usefulness, which feels like an untimely idea, found in Facebook. (Brabazon, 2012).

Google+ is also integrated with Google's free photo album and editing software Picasa (Brabazon, 2012) and, also, integrates Hangouts which is a Google+'s live group video chat (Ovadia, 2011). Its affordance could be best described by comparing it to a web conferencing tool like Adobe Connect (Brabazon, 2012). With Hangouts any user can start a public or more restricted 'hangout' to meet online with nine other people for a group video chat, text chat, and also to watch YouTube videos together (Miller, 2009).

Hangouts has also a version called Hangouts with Extras, which is currently still in beta mode, but can already be used in Google+ (Yee, & Hargis, 2011). In addition to the default

version of Hangouts, Hangouts with Extras provide the users to name their Hangout, edit and start new Google Docs files inside the Hangouts tool and share their own screens with other hangout participants (Miller, 2009). This is a very powerful tool in supporting the progressive inquiry process (Yee, & Hargis, 2011). It is the environment for team meetings to share ideas, make decisions and agree on next steps, as well as for meetings with tutors to get support and feedback. The participants have also used it for spontaneous meetings that serve a social and peer support function. (Teräs & Teräs, 2012).

Recently, Google just created a new web-based service and called it Google Classroom. Google Classroom launched last August, and now more than 10 million educators and students across the globe actively use it to teach and learn together, save time, and stay organized. This service works as a learning management system (LMS) platform for schools that aims to simplify creating, distributing and grading assignments in a paperless way. It was introduced as a feature of Google Apps for Education following its public release on August 12, 2014. (Google, n.d.).

Classroom assists instructors to create and organize assignments quickly, provide feedback efficiently to individual students, and easily communicate with their classes. Classroom helps students also in organizing their work in Google Drive, completing and turning it in, and communicating directly with their teachers and peers. Google Classroom saves both instructors and students time while instructors can make announcements, ask questions and comment with students in real time, and that will improve communication inside and outside of real classrooms. (Google, n.d.)

Google Sites is another way to make information accessible to people who need quick, up-to-date access like students, employees, customers, and so on. Google Sites is an easy way for

people who work together on a site to add file attachments, information from other Google applications (like Google Docs, Google Calendar, and YouTube), and new free-form content. Creating a site together is as easy as editing a document, and the user always has control over access, whether it is just yourself, your team, or your whole organization. You can even publish Sites to the world. The Google Sites web application is accessible from any Internet connected computer. (Google, 2010)

Finally, YouTube is considered to be the biggest social media website in the world for sharing videos, creating unlimited broadcast and own individual channels (Miller, 2009). YouTube is a website headquartered in San Bruno, California (Yee, & Hargis, 2011). It was the innovation of three former PayPal employees in February 2005, then one year later, in November 2006, it was purchased by Google for $1.65 billion US (Brabazon, 2012). It permits users to discover, watch, share initially videos, and gives a discussion to individuals to dialog about the content.

Definition of Terms

The variables of Google Apps are defined in Table 1, see next page. (Miller, 2009; Google, 2010; Google, n.d.; Brabazon, 2012; Teräs & Teräs, 2012)

Table 1: The Definition of Google Apps

Google Apps	Definition
Google Drive	Is a Cloud computing, storage and synchronization service created and managed by Google. It allows users to store documents in the cloud, share files, and edit documents with collaborators. It includes Google Docs, Sheets and Slides.
Google Docs	Is an online word processor that lets clients make content reports and team up with other individuals progressively. It additionally permits clients transferring Word archives and delivers it to a Google report.
Google Sheet	Is an Online application that permits clients to make, upgrade and change spreadsheets and offer the information live on the web.
Google Slides	Is an on the web synergistic presentations application that lets clients make, alter, and convey presentations and team up with other individuals continuously. It is perfect with Microsoft PowerPoint, as well.
Google Forms	Is an easy tool to create forms for personal business, a survey or poll, students quiz or collect data.
Google Translator	Is one of the useful tools that helps to translate more than 50 languages in the world as well as to provide examples where possible.
Google Scholar	Is an online search engine that has been designed to search a wide variety of sources, including academic publishers, universities, and preprint depositories looking for peer-reviewed articles and theses. It provides users both physical and digital copies of results.
Google+	It is the real feature of social network for Google. Google+ was launched in June 2011, and it spreads very fast between users over and over.
Google Hangouts	Is a texting and video stage grown by Google. It breathes new life into discussions with photographs, emoji*, and even gathering feature calls free of charge. It can be joined with companions crosswise over PCs, Android and Apple inc.
Google Classroom	Is a learning management system (LMS) for schools that aims to rearrange making, appropriating and evaluating assignments in a paperless manner. It was presented in the second half of 2014 as a highlight of Google Apps for instruction training.
Google Sites	Is an organized wiki- and Website page creation apparatus offered by Google as a major aspect of the Google Applications for the work profitability suite. Individuals can cooperate on a Site to include record connections and data from other Google applications
YouTube	In November 2006, it was purchased by Google. It permits billions of individuals to find, watch and impart initially video clips, and gives a discussion to individuals and motivates others over the globe.

* Emoji is a group of small digital images or icons used to express emotions or ideas, etc., in electronic communication.

Significance of the Study

UoB, in The Kingdom of Saudi Arabia, is a public university that obtains its funds from the Government represented by the Ministry of Education. UoB is one of the newest universities in the country as well as in the southern region. It is located on an estimated area of 10 million square meters (11,959,900.5 yard) and has 13 colleges that contain 49 schools that have been harnessed to serve more than 16000 students.

The university has almost 1338 employees 680 are faculty members according to new report of UoB's Statistics Center database 2016. The University has wide cultural variety represented not just from Saudi Arabia but also from Africa like Egypt, Sudan, and Mauritania, and from Alsham like Jordon and Syria, also from Yemen and Asia. They teach in both language Arabic as mother tongue and English as needed in some departments like English and Medical Sciences Departments. This diversity enriches the educational environment and mingles the resources The UoB provides to learners and its community as well.

The UoB provides new technology, lab computers, and scientific research equipment that help students and faculty members to achieve the highest knowledge and training in each field of its schools. Since it was part of King Khalid University (KKU), The UoB started using Google Apps for academic purposes and communication about three years ago. These communication and collaboration apps include Gmail, Calendar, Drive, Docs, Google+ plus, Hangout, Sites, classroom and much more.

All of these applications exists completely online (or in the cloud), meaning that all creations can be accessed from any device with an Internet connection (Miller, 2009). KKU was the first Saudi university that has this type of service officially and UoB took a full advantage of that and has signed the Quality Matter Agreement "QMA" with Google Company last year.

Faculty, staff and students have had their own free access to the Google Apps such as Google Drive, Docs, Sites, Slides, Sheets, Calendar, Groups, and similar applications since then.

The agreement and advantage give this study credibility and makes it much more valuable specially after obtaining the results. This study also has the authenticity for being the first study that examines the experiences of faculty members with Google Apps within a Constructivist environment in Saudi Arabia.

Study Questions

It is anticipated that this research will help to improve professional development for faculty members in higher education (colleges and universities) regarding their uses of Google Apps technology. This includes their teaching skills and how they integrate these technologies into their teaching methods. Results from this study will assist UoB university's administration and decision-makers to get a big comprehensive picture of such uses and find out how beneficial Google Apps are. Specifically, this research addresses the following research questions:

- In what way are the instructors' views at The UoB about using Google Apps influencing subject matter and teaching improvement?
- What issues - positive or negative- do The UoB faculty members have regarding the varieties of Cloud computing and, specifically, Google Academic Applications?
- What are The UoB instructors' experiences in using Google Academic Apps in higher education?

Summary

Cloud computing is a recent computing paradigm that has been integrated into the educational system. It provides numerous opportunities for delivering a variety of computing services in a way that has not been experienced before. The Google Company is among the top business companies that afford their cloud services by launching a number of business and academic Apps. It runs these Apps for free to be used for educational purposes, which saves a huge amount of expense for schools and allows institutions to direct scarce financial resources to other areas of need. King Khalid University (KKU) was the first and only Saudi university that officially offers Google Apps to its faculty members, staff, and students since 2012.

When the The University of Bisha (UoB) became a new independent university separated from KKU, it became the second university that owns Google Apps as part of its academic services. This gives UoB a distinctive opportunity and a unique reason to be investigated with lessons learned from the experience. This research focuses on how UoB faculty members take advantage of these Apps' benefits in terms of improving their knowledge in their discipline as well as improving their teaching expertise throughout Constructivist theories and methods.

In the literature review which follows, the essential sources which support this research are discussed.

CHAPTER 2: LITERATURE REVIEW

Introduction

The current vision of Saudi Arabia 2030 is emphasizing the pivotal role of universities and the private sector as substantial elements. Both elements have a huge impact to lead the improvement of internal development and keep up with the Vision 2030 goals and aspirations of the government. However, many companies are not satisfied with the performance of their newly hired workers who just graduated from higher education institutes because of their lack of collaboration and communication skills and being behind (Eisner, 2010). Eisner points out that more than 90% of private sector's executives highly stress collaboration and communication skills in the workplace, and would like to have their employees at least above the average in these skills whether they work face to face or virtually in online environments (2010).

Teaching and training throughout a virtual environment have increased drastically in the workplace over the past decade, and the need of skills in collaboration and communication will be growing especially in the 21st century when most companies, not just in Saudi Arabia, but also around the world will have their own virtual teamwork (Mulki, Bardhi, Lassk, & Nanavaty-Dahl, 2009). This shows us the benefit of teaching students these skills during school age and having them participate in collaborative projects and virtual assignments more specifically in the undergraduate stage (Nickels, Parris, Gossett, & Alexander, 2009).

However, even when it is vital to merge technology in courses, one of the most pressing issues for universities around the world, is the technology budget. Lack of funds makes universities unwilling to purchase additional services or at least update their outdated tools. That makes the outcomes of such universities way behind from companies' expectations and governments' ministries. There is a huge need to have additional funding to support utilizing

technology services in classrooms while the majority of technology tools are pricey and have yearly subscription fees (Cahill, 2011). It is also suggested to find alternative free tools as a solution to keep graduated students up to date in what they need to deal with in the work environment (Fox, 2007). Google company provides Google Apps Education to schools for free as well as to higher institutions. This service is always up-to-date and solves the need of budget.

A number of studies show significant positive results in using Cloud computing and utilizing Google Apps, in particular, and they facilitate collaborative learning among students and promote learning outcomes (Chou & Chen, 2008; Raman, Ryan, & Olfman, 2005; Vaughan, 2008); other research shows no difference between this technology and teaching or learning by the traditional methods. A number of studies also have discovered some negative outcomes. Blau and Caspi (2008) indicate that this type of technology might lead to unpleasant learning experiences and outcomes in traditional face-to-face classrooms. For example, students and instructors might feel uncomfortable in sharing knowledge (Rick & Guzdial, 2006).

However, this research does not intend to compare students' achievement or how their instructors' perceive the integration of these technological tools. This research is intended to investigate whether and how much this technology improves instructors' learning experiences as well as their teaching approaches. In this chapter the literature review is categorized under four relevant subtitles: Studies that use Google Apps in the general educational system, studies which involve training faculty members online, studies on using Google applications/ services in training environments, and studies on higher education that utilize Google Applications.

Using Google Applications and Services

The online applications at present show an arrangement of adaptable instruments. Through these Google devices, correspondence and cooperation among workforce, staff, and learners discuss how learning methodologies are improved. Also, individualized showing and discovering that addresses the needs of different understudies are effortlessly attained. These apparatuses can be sorted in three gatherings: 1) Correspondence (facilitated email, imparted timetables and incorporated feature visit); 2) Coordinated effort as understudies and educators can impart archives online by means of Google Docs and Google locales; and 3) Customization as IT frameworks can be effectively incorporated with (Miller, 2009); (Eteokleous & Ktoridou, 2012).

In the investigation of (Reyna, 2010) "Google Docs in Advanced Educational Settings: A Preparatory Report", the researcher chose to utilize a Google Docs spreadsheet to make an online log and have the capacity to screen tutoring hours of every understudy on a week by week basis. This report gives confirmation of 60 hours of tutoring which understudies need to experience so as to meet the prerequisites of the unit. The data recorded on the spreadsheet by weeks (13 weeks) including the study number, name, meeting, date, time, action and results could be imparted among the 29 understudies enlisted in the unit and utilized as an aide for an exchange on the e-learning site and to get a dialogue going about what the understudies were doing, methods for helping mentees, recommendations, questions, and so forth. The thought was to impart encounters and backing one another.

Higher Education Utilizing Google Applications

A large and growing body of literature has investigated Google Apps over the past decade and emphasized the attention on the provision of academic usage and the financial cost. Fontana (2006) states that Arizona State University (ASU) was the first institution to implement and utilize the Google Application Programming Interface. ASU saved tens of hours patching, upgrading, and maintaining software and hardware systems that were needed each semester for their old technology (Google, 2006), (Fontana, 2006). In 2006, Google reported that ASU just saved over $350,000 a year from its previous email system that did not offer what free Gmail accounts provide. By switching to Gmail, learners had more benefits by accessing messaging, calendar, and collaboration tools instantly (Google, 2006). Oregon has been reported as the first state to get Google Apps (Wolf, 2010). Oregon saved about $1.5 million from IT technical solutions hardware equipment, and software upgrades by using Google tools and Apps (Wolf, 2010).

Similarly, Abilene Christian University reported at least $100,000 reduction in the first year by using Google Apps. This large amount of money was paid for technicians' salaries, software licensing fees, server maintenance and storage costs every year (Boulton, 2008). Moreover, Google (2009) mentions that University of Notre Dame (UND) saved one and half million dollars since it started using Google tools (Google, 2009). It is worth mentioning, that UND's students requested better communication functionality before switching to Google Apps. As a result, the survey shows 36% more students satisfaction and 20% less calls to the campus help-desk by the end of the academic year (Google, 2009).

Furthermore, Fordham University case study showed that calls from users (faculty, staff, and students) to their Help-desk have been decreased by 99% when the university switched from

a system that was freezing at times to Google Apps Education Edition (Google, 2009). This is a very reasonable reason by itself to use such stable tools.

The reasons behind choosing Google Apps in education are not only because of their free cost or ease of use, but also to meet their students' needs or add hybrid courses as another option for learners to choose. In Africa The University of Nairobi, Kenya, more than 50,000 students had used Google Apps to communicate with professors locally and internationally as well as collaborate with each other. The number has increased since then with growth projected at 150,000 students (Gray, 2010). Also, Drexel University was among the first institutions that switched to Google Apps Education Edition to reduce technology amount and benefits from all services that come with it such as Web 2.0, free email accounts for all staff and students, and unlimited files storage (Cox, 2009). Likewise, University of Minnesota did the same to improve its educational system by having access to those numerous services and save money (Cahill, 2011), and Open University Malaysia (OUM) teaches online classes the most and implemented Google Apps to provide a hybrid model that gives additional option to its professors and learners to increase teaching opportunities with the applications that are offered (Sani, 2009).

The literature includes a considerable amount of studies on professors at universities who choose to utilize Google Apps into their academic work with students as well as other professors. This choice of using Google Apps gives instructors the opportunity to maximize their teaching skills and extend their audience from students to university's staff and other professors in other universities while working together in research, projects or sharing knowledge (Mncube-Barnes, 2010). A qualitative research study was conducted at Northcentral University, Arizona, to determine if it is advantageous to teach collaboration with Google Apps in higher education (Cahill, 2011). The researcher used two methods to collect data which were focus groups with

students and interviews with professors. The study had four focus groups of students who use or have used Google Apps collaborative tools in their study, and eight instructors who utilize or have used at least two of these tools. The study revealed the students' point of view of learning collaboration skills and collaborative technology with this suite of tools, and the professors' perceptions of the benefits of using Google apps during teaching. Cahill concluded with that both groups found utilizing such collaborative tools into teaching was effective and beneficial to gain such future necessary collaboration and communication skills, and helped professors to collaborate and communicate more with colleagues and others as well (Cahill, 2011).

Numerous universities are using Google Apps Education Edition and the leading reason that colleges and institutions are switching to Google Apps is to decrease costs. Nevin (2009) maintained that Google Apps gives schools the opportunity to save significant sums of money, since Google Apps replaces the majority of other software and the physical infrastructure, such as networks and servers. For instance, Oregon was one of the first states to get Google Applications, and figured out how to spare about $1.5 million for email, and also to decrease the financial backing for equipment and programming redesigns (Eteokleous & Ktoridou, 2012). Since it is vital to continue teaching with technology, schools are forced to find alternative technology that will meet the same needs at a lower cost. Antolovic, Horvath and Plympton (2009) agreed that universities must be more creative and integrative to get more accomplished, considering the current budget constraints.

The first major college to switch and develop integration utilizing the Google Application Programming Interface was Arizona State University (ASU) (Fontana, 2006). When ASU changed to Google Apps, the instructional technology staff did not have to spend time patching, upgrading, and maintaining software and hardware systems that were not innovative in the area

of technology (Google, 2006). Cox (2009) explained that numerous Web 2.0 tools can have a cost savings in addition to functionality.

Fischman (2008) explained that Drexel University switched to the popular email service to save the university money, since the necessary extra storage that would otherwise need to be purchased was free with these services. Storage space for videos and other large files was an issue, giving the university little choice but to switch email providers or purchase more storage (Fischman, 2008). Boulton (2008) reported that Abilene Christian University saved money by switching to Google Apps and replaced the prior e-mail administrator position with a new developer position. This saved the school at least $100,000 a year in salaries, licensing fees, and storage and server maintenance costs (Boulton, 2008).

In 2009, Colorado State University (CSU) migrated to Google Apps for Education as an e-mail hosting solution for its students from an internal on-premise e-mail system. The additional capabilities of Google Apps, originally seen as a nonessential add-on to the e- mail solution, have boosted the collaboration and communication among CSU's students beyond expectations. Once the faculty and staff saw the potential for collaboration the requests to opt-in increased. This allowed collaboration between faculty and students on a scale not previously witnessed at CSU. Faculty who have made the switch to Google Apps are satisfied and enthusiastic with the service. The Google Apps for Education suite comprises Google Mail, Calendar, Talk, Docs, Sites and Video. Truitt (2009) stated that The University of Alberta was considering outsourcing e-mail to Google, which they have calculated will save over a million dollars annually with costs in salaries, hardware, licensing, and infrastructure. Reis (2008) claimed that Mount Wachusett had more modest savings, since the faculty was still using Microsoft Outlook.

Other universities switched to save money and improve functionality. Google (2006) reported that Arizona State University was spending over $350,000 a year for an email system that did not offer what free Gmail accounts provided. By switching to Gmail, the students also had access to instant messaging, calendar, and collaboration tools (Google, 2006). Ross (2009) shared that University of Minnesota converted to Google to save money and manpower, in addition to having access to numerous other programs including web-based word processing, spreadsheets, calendars, and video channels.

University of Notre Dame switched because students requested better communication functionality; as a result, the university saved one and a half million dollars, reduced calls to the campus help desk by 20%, and improved student satisfaction by 36% (Google, 2009).
Fordham University decreased calls to their help desk by 99% when they switched from a system that was freezing at times to Gmail (Google, 2009). Grady (2007) expressed that university students use the Google Apps collaboration tools to communicate with each other and professors in Africa. The University of Narobi has 50,000 students using Google Apps with growth projected at 150,000 students in Kenya (Grady, 2007).

Another reason universities choose to implement Google Apps is to meet the needs of their learners as they add hybrid or online options. Sani (2009) stated that Open University Malaysia (OUM) teaches utilizing a hybrid model, so they chose to implement Google Apps Education Edition. OUM uses Gmail the most, which also has the OUM logo. The university relies on Google Talk to complement the forum function in the learning management system, Google Calendar to organize meetings, and Google Docs to house workgroups (Sani, 2009).

It is ideal to utilize these tools, so that higher education institutions save money and increase teaching opportunities with the applications that are offered. With hybrid or online

education, universities generally house the content within learning content management systems (LCMS). In order for LCMS to be effective for all higher education institutions, the system must offer the opportunity to collaborate, interact, and participate (Mncube-Barnes, 2010).

There are also professors within universities that choose to utilize Google Apps to work with other professors.

The professors may work in the same university, but they desire to collaborate on their own time in the comfort of their home. Other professors from varying universities desire to work together. For example, Ms. Hewlett from University of San Francisco and J. J. Jacobson from JSTOR†, one of ITHAKA's family launched in 1997, met by communicating utilizing a voice over internet protocol tool and collaborated with Google Docs as their real-time whiteboard, so they could edit as they conversed (Anonymous, 2009). Staff has a responsibility to maximize the new instructional technologies in order to offer students and faculty the possibility to learn, share, and question while working together (Mncube-Barnes, 2010). Communication and collaboration are two skills that need to be implemented or improved in the university setting to prepare students for the workforce (Cox, 2009). Google Apps Education Edition consists of online applications, which includes numerous tools that can assist with collaboration and communication skills and are free to schools and universities (Google, 2009).

There are six core tools that are included: Google Docs, Google Sites, Google Calendar, Google Groups, Gmail, and Google Video which is YouTube (Miller, 2009). Currently there are also 71 additional applications, many of which are utilized in the educational setting, but they do not have technical support from Google (Miller, 2009). Some higher education institutions are switching to Google Apps to save money, and others are switching for all of the tools that are

offered. Google Apps Education Edition does have some competition and downfalls; however, there currently is not a major contender in the education realm, since the service is free.

In 2012 Eteokleous and Ktoridou presented the “Higher Education: Google Applications And Student-Centered Learning” framework which empowers learners, staff and chairmen to convey, work together and partake in a safe cloud environment. This instructive experience turned out to be advantageous for understudies in offering thoughts, raising differing learning issues and, in particular, effectively working together with their companions and speakers in an alternate situation. Extraordinarily prepared Google Applications gave more assets to the teacher to screen understudies' online correspondence, and gave criticism to imparted address presentations and understudies' inquiries through Google mail messages. Quality learning encounters for teachers and understudies can be given through a mixed learning environment when an understudy focused methodology is utilized. Online correspondence and coordinated effort, where learning, contemplations, and thoughts are imparted was an essential piece of the course (Eteokleous & Ktoridou, 2012).

"College Teachers' Recognitions About the Effect of Coordinating Google Applications on Understudies' Correspondence and Joint Effort Abilities" (Cahill, 2014) discovered that eight college educators took an interest in the whole information accumulation preparation that comprised of: (a) reacting to email welcome communicating interest, (b) finishing online assent structure, and (c) taking part in a synchronous individual meeting with 10 open-finished center inquiries that addressed the general examination question: What are college teachers' view of showing cooperation aptitudes with Google Applications for Instruction? College educators were inquired as to why teachers used Google Applications Training Release to educate communitarian innovation. The accompanying topics were produced from teachers' reactions: (a)

available and free, (b) specialized instruments, (c) coordinated effort apparatuses, and (d) not bulky with gathering.

College educators in Cahill's study were requested to impart the most utilized applications they coordinated into their direction (Cahill, 2014). The accompanying repeating topics developed: (a) Google Docs with the end goal of imparting data and for working together, (b) Timetable, Gmail, Google Docs with the end goal of booking, and (c) Gmail with the end goal of giving more flexibility with advanced services. The college educators were requested to examine how they were taught to utilize the devices, and the greater number reported showing themselves how to utilize the apparatuses (Cahill, 2014). They were solicited for their recognitions from the collective favorable circumstances of educating with this particular suite of instruments. The accompanying repeating topics were produced from the college educators' reactions: (a) numerous individuals can team up at the same time, (b) it is electronic, and (c) learners can meet as needed rather than the undertaking of arranging timetables (Cahill, 2014).

In addition, the educators were solicited to talk about their discernments from the community oriented determinants of instructing with Google Applications (Cahill, 2014). The accompanying repeating subjects were gotten from their reactions: (a) the extravagant accessories are restricted, (b) individuals need help getting to instruments or direction, and (c) the guideline is helpless before Google-the apprehension of losing data or the framework going down. The teachers were asked how they taught Google Applications Training Version to learners, and their reactions framed the accompanying subjects: (a) they display the essentials, (b) they talked understudies through how to utilize the applications, and (c) they reported not showing learners whom they expected knew how to utilize the applications or would in the end gain from the web (Cahill, 2014).

An examination of the teachers' reactions uncovered that the dominant part taught with Google Applications, in light of the fact that the applications were sans open, and supplied coordinated effort apparatuses that make gathering adapting less lumbering. The most prominent instrument they used for coordinated effort was Gmail and the second was Google Docs. Most of the teachers taught themselves how to utilize the devices (Cahill, 2014). They accepted the favorable circumstances that supported various understudies with teaming up with others at the same time and it was electronic. The best determinant was that a few people obliged exceptional aid getting to the apparatuses and directions on the most proficient method to utilize the application. A few educators either talked understudies through how to utilize the application, expected understudies knew how to utilize the applications, or the teachers anticipated that learners would show themselves (Cahill, 2014).

Most of the teachers remarked that understudies dominatingly utilized Gmail to convey or submit assignments and Google Docs to work together or present with associates. They accepted that understudies' perspectives of learning coordinated effort through collective innovation were certain (Cahill, 2014). The most widely recognized reaction in regards to shared devices that understudies were acquainted with were the apparatuses on Board, for example, web journals, wikis, and diaries. The prevalent remarks from the college teachers were that they expected to be taught how to utilize the devices successfully, and a few reported the need to consolidate Google Apps into their courses (Cahill, 2014).

Training Faculty Members Online

In "*Training Online Faculty: A Phenomenology Study*" (Kang, 2012) mentions that the writing and studies that have been done on preparing staff to be qualified to show online skills and competencies still address the issues that were investigated 10 years prior. Kang's work

concentrates on making a significant move here, "It is important to re-assess the quintessence of preparing in the connection of delivering qualified online personnel to show quality online courses" (Kang, 2012, p. 400). The creator applies a phenomenological way to deal with a number of online staff's' preparation experiences. He watches that there existed accidental elements that could influence the nature of preparing. Further examination showed that it was the distinctive levels of understandings of "preparing" between diverse gatherings that prompted varieties in the nature of preparing.

Consequently, diverse gatherings included in preparing online personnel ought to take a gander at preparing from a frameworks approach and perspective preparing as an open door for three reasons: (1) to exchange information and abilities vital for leading quality online direction; (2) to expel boundaries keeping staff from showing online; and (3) to change conventional employees into exceptionally qualified online workforce.

Using Google Apps to Improve Teaching Skills

Kaimuloa Bates concludes in his study (2011) "Using Google Apps in Professional Learning Communities" to that Google Apps could be used to enhance collaboration in a Professional Learning Community (PLC). Changing the mentality of instructors will be definitely a test, particularly when innovation presents itself with glitches. I think if the members had an outstanding knowledge, there will be more prominent "purchase in" on the grounds that these members will be spreading the word to their partners.

Notwithstanding all the difficulties, 90% of the members have demonstrated their eagerness to execute Google Applications in their PLC. Members have picked up information about the apparatus by figuring out how to make a Google account, another record and offering an archive. The half breed classroom setting has permitted individual cooperation which the

members are most agreeable with. They found themselves able to make inquiries as they were experiencing the module. Catch up lessons to bolster instructors will be expected to guarantee that the educators get the fundamental aptitudes to utilize the instrument with certainty.

Members in Kaimuloa Bates' study (2011) saw how Google Applications have upgraded coordinated effort for 5th grade instructors and have indicated enthusiasm for seeing the apparatus in real life. By having the members see the apparatus in real life, they will perceive that Google was not hindered by firewall and the innovative glitches have been unraveled. I expect that the couple of members can have any kind of effect in the way their PLC meets expectations. In the event that the members execute it with a couple of educators inside their PLC, the "up front investment" would be enthusiastically received.

Future utilization of Google Applications as a joint effort apparatus in an Expert Learning Group might now be more probable as an after effect of this instructional configuration module. Instructors who are constructing a PLC perceive that they must cooperate with a specific end goal to attain the reason for learning for all (Kaimuloa Bates, 2011). Google Applications might conceivably be the answer for uniting educators to attain the objectives to upgraded cooperation and collaboration. (Kaimuloa Bates, 2011).

Kelly Unger's study (2012) *Examining The Factors of a Technology Professional Development Intervention* examined which technology professional development factors teachers perceived as the most beneficial for impacting the quality of a technology professional development intervention (TPDI). The perceptions from the teacher participants determined that beneficial factors that should be included in the design of technology professional development should be relevant and practical to their teaching practice and provide access to resources beyond the conclusion of the TPDI, such as instructional how-to videos that demonstrate the technology

tasks (Unger, 2012). Other perceptions: the instructor and content resource; flexibility to work in an independent environment that allows for working at their own pace with relaxed due dates for assignments; and easy, clear, and organized instructional messages for content delivery, instructor feedback, and instructions and requirements for assignments. The study concludes that the technology integration and professional development literature align with the TPACK framework, which was used to successfully guide the design and implementation of the TPDI, used for this study (Unger, 2012). The theoretical perspectives of TPACK were beneficial for increasing the secondary education teachers' perspective of factors that impact the quality of technology professional development.

Constructivist Learning & Using Google Apps

Constructivism looks at learning as the process of exploring a subject, environment, and constructing individual meaning. The goal of Constructivism is to help learners build connections and create meaning from a learning environment. In Constructivism, there is no "common reality" shared by everyone and no two people have precisely identical experiences, share the same reality nor ascribe precisely the same meaning to anything (Stevens, 1996). Current discussions suggest that the Constructivist approach to learning is supported by technology using Google Apps. ALMĂŞAN H. and ILIE M. (2015) published their case study that was focused on the idea that learning is possible through dual factors. The factors include social interaction and simultaneous exposure to cognitive experiences in which peer and collaborative learning are central as well as the instructor serving as moderator, facilitator and mediator of learning supporting students' empathy and cognitive abilities, developing positive attitudes of self-esteem and developing digital competencies (ALMĂŞAN & ILIE, 2015).

Summary

This section presents the most relevant literature review on the subject by the researcher until now. The literature review was categorized into four scopes: using Google Apps in general educational system, using Google into higher education, training faculty members online, and utilizing Google Apps to improve teaching skills.

In the next section, the research methodology is discussed in detail and the chapter also describes the data collection techniques and sampling procedures.

CHAPTER 3: METHODOLOGY

Personal improvement is one of the main pillars of any professional job, and in education it becomes even more an essential cornerstone that affects quality in the entire learning system. The University of Bisha (UoB) gives great attention to this each year and utilizes part of its budget on continuous development of its faculty and staffs' skills and knowledge in order to provide better education and services to its students and the community as well. However, limited faculty time and schedule loads provide some challenges in front of faculty development. By providing The UoB Google educational Apps available to all faculty members with several training sessions and broadcasts during the past couple years, the self-learning and self-improvement behavior becomes highly expected from all faculty who have full access to these applications.

This research utilizes an instrument that examines The UoB faculty members' usage of Google Apps, Google Drive including (Docs, Sheets, Slides), Google Scholar; Google+ plus; Google Form; Google Classroom; Google Hangout; and YouTube as part of Google services, in order to evaluate how faculty members educate and prepare themselves to be more effective and contribute to the success of The UoB.

The instrument used in this study, precisely, is a survey-based research with mixed method design that concentrates on the influence of those Apps on updating faculty members' teaching discipline and improving their teaching skills as well. The wide diversity in the research population plays a significant impact in their feedback and research data. These data are expected to be affected by a number of demographic factors such as age, gender, nationality, academic major, years of using computer experience, years of Internet experience, experience with online education, previous experience with online communication tools, use of social media

applications and websites, and finally, the concept of Cloud computing. This research determines if faculty members are or are not affected by each of the above-mentioned demographic variables.

Participants

In the latest statistical report, The UoB's thirteen colleges comprised of 49 schools have been harnessed to serve more than 16000 students (mohe.gov.sa, 2015). The university has almost 680 faculty members who work full-time five days a week. Thus the population for this research is all The UoB's faculty members according to The Higher Education Statistics Center database (mohe.gov.sa, March, 4, 2015).

Research Design

An online survey-based mixed method research (See Appendix F for English version and Appendix G for Arabic translation) was used to gather demographic information and data to investigate how faculty members at The UoB benefit from Google Apps (education edition) in terms of improving their teaching discipline and teaching skills in class and on-line as well. Since the study deals with numbers and participants' experiences, mixed method was used to collect, analyze, and mix data, both quantitative and qualitative, to provide a better understanding for the research questions than either approach alone.

The research takes place online in Bisha City, Saudi Arabia, during the Fall semester 2016 with the required permission and agreement from the Vice-President of The UoB (See Appendix E). With support of The Deanship of e-Learning the questionnaire sent to all faculty members' email addresses in all of the university's colleges (see Appendix H) as well as posted on Blackboard homepage (See Appendix I).

Data Sources

The instrument consists 44 questions is five sections which are discussed here. The first part consisting of seven questions, includes General Information (demographic factors) which collects information about the age of the participants, their gender, their nationality, their academic major, years of using computer experience, years of Internet experience, their experience with online education, previous experience with online communication tools, their use of social media applications and websites, and, finally, their concept of Cloud computing. This part of the instrument will be very crucial while analyzing the data, since it provides a closer look into who benefits more from Google Apps and why.

The second part has 10 questions collecting data about the participants' experience in online teaching starting from the number of years, the number of courses, and the type of tools they use to deal with and how much they are satisfied with that experience.

The third part has 9 questions that emphasize participants' experience in Using Google Academic Apps to answer the study question that says "What issues - positive or negative- do UoB faculty members have regarding the varieties of Cloud computing and, specifically, Google academic Applications?"

Then, the fourth part consists of 8 questions that ask about Using Google Apps to improve academic knowledge discipline.

Finally, Part 5 consists of 5 questions, collecting data about using Google Apps in order to improve participants teaching skills. In addition, there are closed and open-ended questions to collect more information from the participants. The instrument appears in Appendices F and G.

Data Collection Techniques

Based on a review of literature in the field of cloud computing and higher education, and using Google Apps, this study uses a survey research design that has an intended sample while UoB is one of two universities out of 30 public academic state schools in The Kingdom of Saudi Arabia that has "officially" been granted a contract with the Google Company to use its services (education edition) for academic and educational purposes. This gives the research unparalleled importance in terms of significance. The official letter giving permission to the researcher to conduct this study appears in Appendix D.

Sampling Techniques

The real sample is comprised of the entire faculty population (N= 673) who meet the research terms and conditions. However, according to Krejcie, & Morgan, 1970, the minimum sample number for such population should be 245 participants for scientific research and to guarantee accurate results that can be generalized on the study's population.

The survey begins with four inclusion criteria which are: the participant must have had computer usage experience, have had Internet usage experience, have access to their Google account, and have used at least one of the Google Apps in their academic career.

Issues of Piloting, Reliability and Validity

The survey was piloted initially and reviewed by five male faculty members from The Instructional Technology Department at the College of Education in The University of Bisha (UoB) in order to ensure face validity. Also, the questionnaire was further reviewed by three online learning environment experts. Two of these were from Saudi Electronic University (SEU) and the third one from KKU, in order to ensure the content validity. It was measured by a four-point content validity index:

1) Not relevant, has to be deleted.

2) Item needs some revision,

3) Relevant but needs minor revision, and

4) Very relevant (Alanazy, 2011)

Based upon the suggestions and revisions made by all eight experts and to meet their feedback, three questions were modified and corrected to be more clear and understandable in both versions, English and Arabic, and only one question was deleted because its meaning was duplicated in a previous question. Because the majority of the research population is Arabic, the research instrument was translated into Arabic. To do this the researcher selected a certified translation office to translate the instrument from English to Arabic. After that, the Arabic version was sent back to Instructional Technology Department at College of Education, The UoB, Saudi Arabia, to be reviewed again to ensure face validity of the survey for use with Arabic faculty members (See Appendix G).

Data Analysis and Interpretation

A descriptive analysis, analysis of variance (ANOVA), t-test, and a Chi-square test were used to the treat the data and determine the results. T-test is used for comparing the actual difference between two means in relation to the variation in the data (expressed as the standard deviation of the difference between the means). Therefore, in order to determine the overall impact of using Google Apps the Kruskal Wallis, a non-parametric analogue of ANOVA, is more appropriate for the ordinal scales and additionally analyze the effect, if any, the dependent variables had on independent variables. (The dependent variables for this study are Google Apps. The independent variables are the demographic information). Conversely, a Chi-square test is

used to determine relationships between faculty usage of Google Apps to improve their knowledge and use of them in their teaching courses.

Ethical Considerations

This part is based on the Wayne State University Institutional Review Board (IRB) application (Appendix A) and Wayne State University WSU obligations (see Appendix B) and form amendment (see Appendix C). Typical topics include confidentiality, bias, and appropriate disclosures, etc.

Informed Consent

The following letter speaks to informed consent:

Ladies and Gentlemen, this survey is conducted and designed at Wayne State University (WSU), Detroit, Michigan, USA. to investigate and scrutinize the actual uses and experiences of Google applications (Apps) at The University of Bisha (UoB) in Saudi Arabia during the Fall semester of 2016. You are being selected to participate in this study because of your current position as an instructor in this university. If you agree to take part in this research study, then you will be questioned about demographic information as well as your academic usage of specific Google Apps such as Google Drive, Google+, YouTube ...etc.

As a researcher, I would like to ensure you that all your answers will be 100% confidential, and will be used for the research purposes only. Also, your participating is entirely voluntary, which means there is NO financial compensation for your participation and you may retreat at any time. However, your contribution will help in better integration and implementation of utilizing Google Apps into teaching methods and the learning activities in higher education, in general, and in Kingdom of Saudi Arabia, in particularly. It requires about 20 minutes to

complete the survey which has five sections. The survey must be completed in one sitting; it cannot be saved and returned to later.

Participation: By completing this survey you are agreeing to participate in the study topic. Participation in this research is for faculty members at The University of Bisha; if you are not a UoB's instructor please do NOT answer this survey.

Questions: If you have any question about this study now or in the future, you may contact Bandar Abdullah Alshihri at:

Cell-phone number: (+1) 313-231 8800

Twitter: @Bandar_Alabdaly

Google+: Bandar Alabdaly

Email: Bandar.alshihri@wayne.edu

If you have questions or concerns about your rights as a research participant, the Chair of the Institutional Review Board (IRB) at WSU can be contacted at (313) 577-1628; you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Research Summary Table

Table 2 summarizes the key information in the research design. Research questions are keyed to the instrument questions. Variables, Data collection methods, and Data Analyses are noted.

Table 2: Summary of Key Information in the Research Design

Research Questions and Instrument questions which answers the Research questions	Variables/ Key Factors	Sample/ Participants	Method(s)	Data collection Methods, Resources & Instruments	Data Analyses
In what way are the instructors' views at The UoB about using Google Apps influencing subject matter and teaching improvement? **Questions: 24, 26, 27, 28, 30, 31, 38, 39, 42, 43, 44**	- Academic Major - Google Apps, & using Internet	UoB's faculty members	Mixed Method	Survey + open-ended questions	ANOVA, t-test, and a Chi-square
What issues - positive or negative- do The UoB faculty members have regarding the varieties of Cloud computing and, specifically, Google Academic Applications? **Questions: 17, 20, 23, 25, 26, 27, 28, 30, 33, 34, 36, 37, 43**	Academic Major, using Internet, using computer, and Google Apps			Survey	ANOVA, t-test, and a Chi-square
What are The UoB instructors' experiences in using Google Academic Apps in higher education? **Questions: 29, 32, 33, 34, 35, 36, 37, 40, 41, 44**	Google Apps, and using online learning			Survey + open-ended questions	ANOVA, t-test, and a Chi-square

CHAPTER 4: RESULTS

This chapter presents the results of the data and the data analysis process. The results are described in a systematic and detailed way. Each question of the study's instrument is clarified separately in order to address the research questions. The study has three main questions as identified here:

- In what way are the instructors' views at The UoB about using Google Apps influencing subject matter and teaching improvement?
- What issues - positive or negative- do The UoB faculty members have regarding the varieties of Cloud computing and, specifically, Google Academic Applications?
- What are The UoB instructors' experiences in using Google Academic Apps in higher education?

Demographic information is presented to have a wider vision for the results. The data were analyzed using the SPSS statistical software version 23 (2016), and the results of the data analysis are presented here in three sections: First, the distribution process and its return rate of surveys, second, description of the respondents' demographics and finally the data analysis related to the research questions.

Distribution Process

The data were obtained by using the Qualtrics research platform through the Wayne State University server, and sent to The UoB faculty members electronically by posting the announcement on the first page of The UoB's Blackboard system (Appendix H)

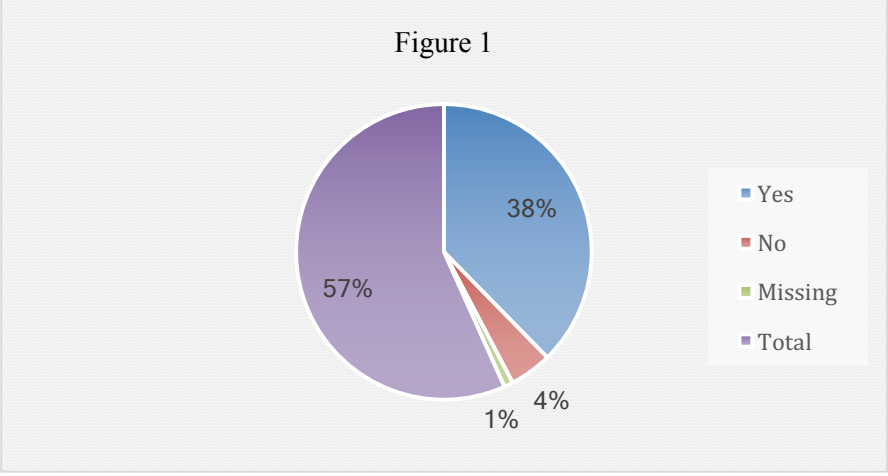
Each survey had a confidential electronic code number to identify each individual from the research specimen when they agreed to participate. The distribution process took about six weeks far more than what was expected. The period time that was posted was two weeks before

the final exams and was insufficient for the majority of instructors who have labs and practical exams. So, I had to extend the survey period two more weeks after the end of all final exams to collect more data. There were a total of 131 participants only 17 (13.0%) of them disagreed to answer all the questions and stopped the interview (14 answered with (No) which equals 10.7% along with 3 respondents who missed this question because they probably refused to continue the interview on earlier stage, which equals 2.3%) and 114 of them consented to answer all the questions. (Table 3)

Table 3: Agreement of Participating in The Study

Answer	%	Count
Yes	87.0%	114
No	10.7%	14
Missing	2.3%	3
Total	100%	131

Figure 1: Agreement Of Participants



Data analysis procedure and Description of the Respondents

The results of the study were imported in SPSS program (Statistical Package for the Social Sciences) for further data analysis. The variables were labeled according to the

questionnaire. Several socio-demographic variables were recoded to get groups for comparative analysis. The logic of this recording is described in the next section along with descriptive statistics. A minor cleaning was provided for the data. First, cleaning concerned the questions about the number of online courses taught overall and now (Q.11 and Q.12). It was assumed that if the participant is teaching online courses in the current semester, these courses should be taken into account when analyzing the overall number of online courses taught. So, the answer 'None' in overall number of courses question (Q.11) was assumed as invalid in case any number of currently taught courses was mentioned and this number was copied to the (Q.11) variable.

For multiple response variables, concerning the usage of different Google Apps, the total number of respondents was adjusted in case there were respondents who did not mention any applications. This was done to receive a valid share of Google Apps usage, adjusted to the total number of participants. To make this correction in case of no applications mentioned by the respondent the answer 'no applications' was added to multiple response variables.

For the missing answers in Google Apps evaluation questions, there was no recording and adjustment done and the data were calculated from the number of respondents who provided an answer to the question. This allows receiving valid results of application evaluation among those who are ready to evaluate it.

Reliability of Instrument

To ensure that the consistency of the measurement is built well, (SPSS) program was used to measure Cronbach's Alpha (α) in order to ensure the reliability of the questionnaire items. Cronbach Alpha (α) is a powerful method used to measure reliability for instruments using Likert scales (Alanazy, 2011). The result showed strong and very high internal consistency reliability for The UoB faculty members' attitude about using Google Apps in learning and

teaching. Table 4 shows the details for the calculation of Cronbach's Alpha Coefficient (α) for all sections and the number of items in each section. The consistency among the survey items is reliable since the values of Cronbach's Alpha were considerably high with average of 0.96.

Table 4: Internal Consistency Reliability Analysis

(N=12)

Questions	(α)
19) In general, indicate how often do you use these Apps?	0.893
20) Do you have a personal channel, page, or an account for the following Apps	0.929
28) When you have a new subject you would like to get more information about, which of the following Google Apps do you use to educate yourself?	0.953
30) Have you used any of the following Google Apps to share scientific thoughts or personal perspectives about related academic topics with colleagues locally or internationally?	0.957
31) Do you, currently, use any of the following Google Apps to share scientific thoughts or personal perspectives about related academic topics with colleagues locally or internationally?	0.968
32) Have you used any of the following Google Apps to discuss related academic topics with other colleagues locally or internationally?	0.947
33) Do you currently use any of the following Google Apps to discuss related academic topics with other colleagues locally or internationally?	0.982
35) Do you interact with colleagues locally or internationally who ask for feedback in their academic subject by using any of the following Google Apps?	0.992
38) Have you used any of the following Google Apps in your classroom to share, interact, or discuss relevant content to your course	0.930
40) Have you referred your students to any of the following Google Apps to learn from, react to, or discuss relevant content?	0.957
41) How often do you integrate the following Google Apps in your students' testing and assessment procedures?	0.961
42) Indicate your level of skills in creating content in the following Google Apps	0.972
43) How have Google Apps improved efficiency, productivity, and other teaching operations in your classroom?	0.981

Data Analysis Results

Data analysis results are presented in six parts all having a common theme and providing information for the research questions. The first part provides description of the participants' socio-demographical characteristics. The second part is dedicated to overall Google applications and cloud computer awareness and usage among The UoB faculty members and provides information for the third research question: What are The UoB instructors' experiences in using Google academic Apps in higher education? The next part adds details about Google application

usage purposes: how do The UoB faculty members use these applications for improving their professional knowledge, in their teaching process and for scientific communication. The results of this part provide the answer to the first research question: In what way are the instructors' views at The UoB about using Google Apps influencing subject matter and teaching improvement.

The fifth part presents an overview of The UoB instructors' improvement in efficiency, productivity and other teaching operations gained because of using Google Apps. The last part of the results section provides information about non-beneficial data from The UoB faculty members Google Apps and investigates the reasons of the respondents' choice. Along with the fifth part, it provides the answer to the second research question: What issues - positive or negative - do The UoB faculty members have regarding the varieties of Cloud computing and, specifically, Google academic Applications?

Descriptive Statistics

There were total 131 participants of the study and 114 of them consented to answer all the questions. More than 70% of them preferred Arabic language to answer the rest of the survey (n=81) and just above one fourth (n=29, 25.44%) continued the survey with English, and for unknown reason there were 4 missing answers in this question (Table 5).

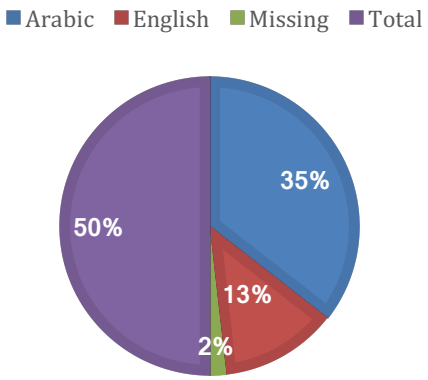
Table 5: Language Selection

Answer	%	Count
Arabic	71.05%	81
English	25.44%	29
Missing	3.51%	4
Total	100%	114

N= 114

Figure 2: Language Selection

Figure 2



The majority of the participants were men (n = 80, 70.2%), while less than third being women (n = 34, 29.8%) (Table 6).

Table 6: Select Your Gender:

Answer	%	Count
Male	74.58%	88
Female	25.42%	30
Total	100%	118

Figure 3: Gender Percentage

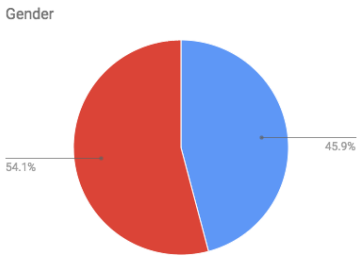


Table 7 shows that almost half of the respondents are between 35 - 44 years age group (n = 54, 47.4%) and a total of 14 (12.2%) respondents are 45 years and older. The share of younger

participants is higher; there are 20 (17.5%) respondents younger than 25 years old and 26 (22.8%) belong to age group (25-34 years old) (Table 7).

Table 7: Age Group Selection

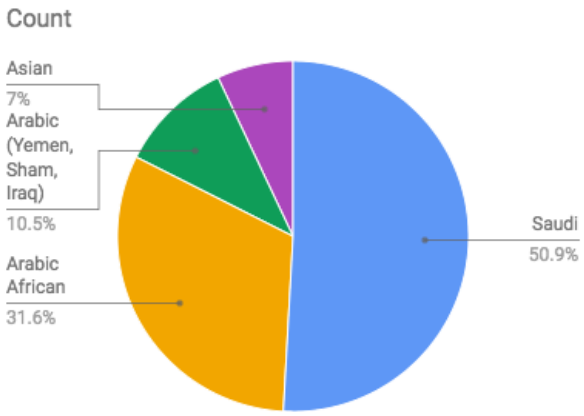
Answer	%	Count
Under 25 years old	17.54%	20
Between 25 - 34 years	22.81%	26
Between 35 - 44 years	47.37%	54
Between 45 - 54 years	6.14%	7
From 55 or older	6.14%	7
Total	100%	114

Just about half of the participants were Saudi (n=58, 50.88%) and the second half were from African nations (Egyptian, Sudani, Mauritania) (n=36, 31.58%), Yemen and Alsham (n=12, 10.53%) and Asian (n=8, 7.02%) (see Table 8).

Table 8: Selection of Nationality

Answer	%	Count
Saudi	50.88%	58
Arabic (Gulf citizen)	0.00%	0
Arabic (African)	31.58%	36
Arabic (Yemen + Alsham and Iraq)	10.53%	12
Asian	7.02%	8
European	0.00%	0
American	0.00%	0
Other	0.00%	0
Total	100%	114

Figure 4: Nationality



Only 80 (70.2%) of the participants provided information about their academic major. The most frequent answers were Curriculum and Instruction (n = 12, 10.5%), English Language Literature (n = 12, 10.5%), Islamic Studies (n = 10, 8.8%), Instructional Technology (n = 9, 7.9%), Computer Science (n = 6, 5.3%) and Linguistics (n = 5, 4.4%). Other study directions were mentioned by not more than 3 respondents. The majority of the participants belong to Science and Arts College (n = 43, 37.7%). Another 23 (20.2%) respondents stated they work in The College of Education. Four respondents (3.5%) said they were working in Applied Medical Sciences. Almost one-third of the respondents missed the question and provided no answer (n = 33, 28.9%).

The most frequent departments named by the respondents were similar to the academic major. These were: English Language (n = 19, 16.7%), Curriculum and Science Instruction (n = 12, 10.5%), Instructional Technology (n = 11, 9.6%), Islamic Studies (n = 9, 7.9%), Arabic Language and Information Systems (both n = 6, 5.3%), Computer Science (n = 5, 4.4%) and Nursing (n = 4, 3.5%). Other departments were named by no more than three participants. Similar to previous questions about a third (n = 33, 28.9%) of the respondents chose not to name the department in which they work.

Regarding academic experience, the majority of the participants work as assistant professors (n = 65, 57.0%) with two (1.8%) more being an associate professor. A fourth of the respondents work as a lecturer (n = 29, 25.4%) and four more work as an instructor (n = 2, 1.8%) and as a teaching assistant (n = 2, 1.8%). A group of 14 (12.3%) participants mentioned other academic levels, see (Table 9) next page.

Table 9: The UoB Academic Qualification

Answer	%	Count
Instructor	1.75%	2
Teaching Assistant	1.75%	2
Lecturer	25.44%	29
Assistant Professor	57.02%	65
Associate Professor	1.75%	2
Full Professor	0.00%	0
Other	12.28%	14
Total	100%	114

Almost all the participants (n = 112, 98.2%) teach any courses in the current semester whether in class (face-to-face) or on-line as shown in Table 9. Two of them did not (1.75%) because of their full time administrative work.

Table 10: Teaching Load During Study's Semester (in-class or on-line)

Answer	%	Count
Yes	98.25%	112
No	1.75%	2
Total	100%	114

It can be seen from the data in Table 10 that half of the respondents (n = 58, 50.9%) are quite experienced in using the computer and have more than 10 years experience. Another third (n = 39, 34.2%) are fairly skilled in computer usage with 5 to 10 years experience, and only 17 (14.9%) have less than 5 years experience, which is caused by their younger age (all of them are younger than 35 years old).

Table 11: Possessing Computer Experience

Answer	%	Count
Less than 5 years	14.91%	17
From 5 to 10 years	34.21%	39
More than 10 years	50.88%	58
Total	100%	114

Figure 5: Number Of Online Courses Taught Overall And In Current Semester

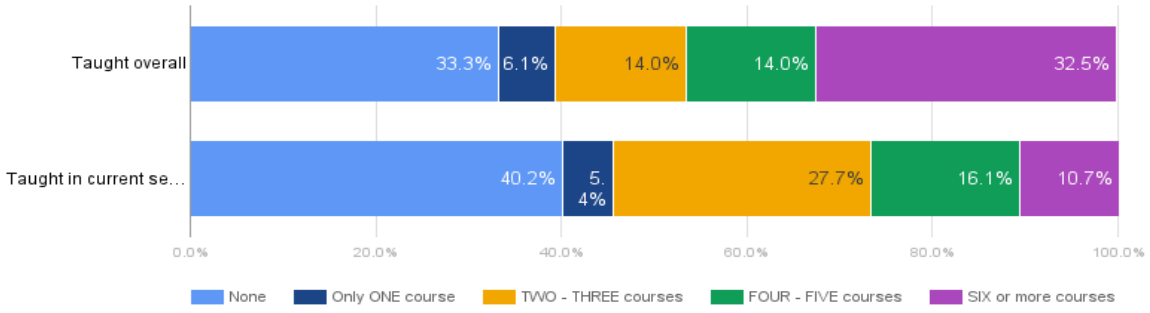


Figure five represents the number of online courses taught by the participants through Blackboard or other Learning Management Systems (LMS) such as WebCT or Moodle. The shares of participants who have more experience (six and more courses taught overall) and no experience of online courses teaching is almost equal (n = 37, 32.5% and n = 38, 33.3% accordingly). The other third (n = 39, 34.2%) have moderate online teaching experience with one to five courses taught.

As for teaching currently online courses over half of the participants (n = 61, 54.5%) are active users of this type of methodology and have two and more online courses at the moment of interview with the majority of them having two to three courses (n = 31, 27.7%), followed by 18 respondents (16.1%) who teach four to five courses and a tenth of respondents (n = 12, 10.7%) who have six online courses or even more. The share of those who teach only one course is

relatively small (n = 6, 5.4%) Whereas the share of those who do not teach any online courses at the moment is relatively high (n = 45, 40.2%).

For further comparative analysis respondents were merged into several groups according to their computer and internet usage experience, followed by the number of online courses ever taught and social media usage activity. The groups were designed to be almost equal by size and meaningful for comparison (Table 12). The frequencies of Google Apps usage and their evaluation by the participants were compared between different experience groups. Over half (n = 64, 56.1%) of the respondents are very experienced in Internet usage and have more than 10 years experience (see Table 12) with almost half of them (n = 34, 29.8%) being very experienced using the Internet more than 15 years. The other half (n = 50, 43.9%) are less experienced with less than 10 years, but only 6 of them (5.3%) have less than 5 years of the Internet usage experience while the majority of this group (n = 44, 38.6%) have 5 to 10 years experience.

Table 12: Comparison groups structure and frequencies

Question	Answers	n	%
8) How many years of using Computer experience do you have?	Less than 5 years	17	14.9%
	From 5 to 10 years	39	34.2%
	More than 10 years	58	50.9%
9) How long you have been using Internet "in general"?	Less than 10 years (less than 5 years + 6-10 years)	50	43.9%
	Between 11-15 years	30	26.3%
	More than 15 years	34	29.8%
11) How many Online courses have you taught in the past so far at UoB whether using BlackBoard, WebCT, Moodle or any other Online teaching method	No experience	38	33.3%
	Moderate experience (1 -5 courses)	39	34.2%
	Much experience (6+ courses)	37	32.5%
13) Do you consider yourself an active user of social media websites and their applications? (ex. Facebook, Twitter, Linkedin, Google+, and Telegram etc.)	Active (Extremely + quite)	52	45.6
	Moderate active	46	40.4
	Not active (slightly active + not active at all)	16	14.0

One more measure of overall computer usage experience applied in the questionnaire was self estimation of the participants' activity in using social media websites and their applications (eg., Facebook, Twitter, LinkedIn, Google+, and Telegram, etc.). The majority of the respondents (n = 46, 40.4%) evaluated their activity as moderate, a fifth (n = 23, 20.2%) as extremely active and a fourth (n = 29, 25.4%) as quite active. The group of inactive users was rather small: (n=13, 11.4%) participants said they are slightly active users and only three (2.6%) respondents evaluated themselves as being not active at all, see (Table 13) on the next page.

Table13: Consideration of Social Media activities

Answer	%	Count
Yes, extremely active	20.18%	23
Quite active	25.44%	29
Moderately active	40.35%	46
Slightly active	11.40%	13
No, not active at all	2.63%	3
Total	100%	114

When it comes to satisfaction communication skills, the ANOVA Kruskall-Wallis test was applied on questions 14, 15, 16, and 17, and the data shows that more than 80% of the participants were either fairly (n= 38, 33.3%) or very satisfied (n=57, 50.0%) about online communication, only 11.4% (n = 13) of the sample were dissatisfied, 2.6% of them were not satisfied at all (n =3), see Table 14.

Table 14: Satisfaction with Online Communication

Answer	%	Count
Very Satisfied	50.00%	57
Fairly Satisfied	33.33%	38
Neither Satisfied nor Dissatisfied	5.26%	6
Somewhat Dissatisfied	8.77%	10
Very Dissatisfied	2.63%	3
Total	100%	114

By applying Chi-Square on this question, nearly half of the respondents (n = 48, 42.1%) considered themselves familiar with the concept of cloud computing and its services. Third of them considered themselves somewhat familiar (n= 37, 32.5%), and 14.9% mentioned that they are not familiar that much (n= 17). On the other hand, data show that 10.5% of those who surveyed indicated that they have no idea about this concept (n=12) as seen on Table 15.

Table 15: Familiarization With the Concept of Cloud Computing

Answer	%	Count
Extremely familiar	21.05%	24
Very familiar	21.05%	24
Somewhat familiar	32.46%	37
Not that much familiar	14.91%	17
I have no idea about it	10.53%	12
Total	100%	114

Chi-Square was used on the data and showed that most of the respondents do share documents through Internet soft copies (n = 112, 98.2%) but the frequency of usage of this communication type differs significantly. There are over one-fourth of the respondents (n = 32, 28.1%) who share e-copies all the time and another half (n = 56, 49.1%) who do it most of the time. 15 participants (13.2%) said they use Internet electronic copies only for urgent documents and another 9 respondents (7.9%) barely share e-copies. Only two of the surveyed (1.8%) stated they did not use this type of document sharing and preferred a printed version all the time.

Table 16: Preference of sharing documents through Internet as electronic copies (soft copy)

Answer	%	Count
Yes, I share e-copies all the time	28.07%	32
I do share e-copies most of the time	49.12%	56
I share only the urgent documents via Internet only	13.16%	15
I barely share e-documents	7.89%	9
No, I do not share soft copy, and I prefer a printed version all the time	1.75%	2
Total	100%	114

After speaking about their preferences and frequency of sharing documents through Internet as e-copies, the respondents were asked to share the reasons for their answer in 2 to 3

sentences. There were 71 respondents (62.3%) who provided a valid answer; whereas, the other third (n = 43, 37.7%) skipped this question. The two most frequently named reasons to use e-copies were the ability to save time by sharing e-copies (n = 40, 56.3%) and easiness of use (n = 39, 54.9%). The third frequent answer with almost a fourth of the respondents (n = 17, 23.9%) was the safety of the service. The participants said it allows them to store their work. In addition to these answers two other respondents (2.82%) mentioned a similar reason - "allows retrieving data".

Three reasons were almost equally popular among the respondents with slightly more than a tenth of the participants mentioning the following: sharing e-copies is useful because it is free of charge and allows us to save costs (n = 9, 12.7%); it provides access anytime (n = 8, 11.3%) and it is especially useful while travelling or when you cannot reach the person of interest (n = 8, 11.3%). Another 5 respondents (7.0%) stated the use of e-copies because one can use them anywhere.

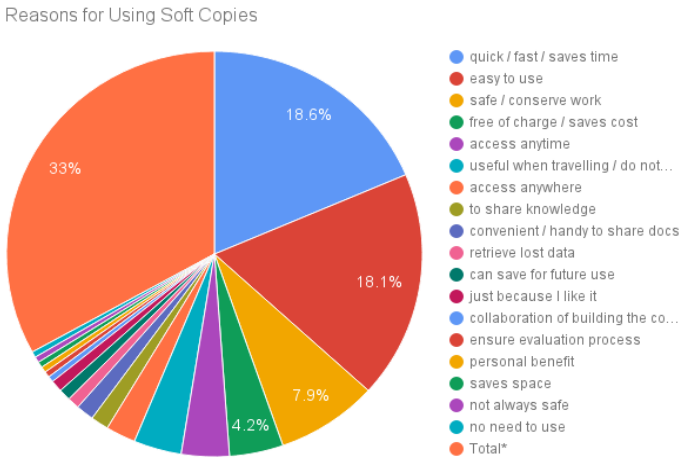
There were a total of 4 participants (5.6%) who spoke about sharing knowledge and collective working on the document. Three of them (4.2%) said they use e-copies to share knowledge and the answers that this service allows 'collaboration of building content' and 'ensures evaluation process' named by one respondent each (1.4%). Other answers noted in Table 17 were mentioned by no more than 2 respondents each. Remarkably there were only two participants who barely used e-copies and provided a valid answer about the reasons: one of them (1.4%) find e-copies unsafe and the other (1.4%) just has no need to use this service.

Table 17: Reasons for Using e-Copies

Answer	%	Count
Quick / fast / saves time	56.34%	40
Easy to use	54.93%	39
Safe / conserve work	23.94%	17
Free of charge / saves cost	12.68%	9
Access anytime	11.27%	8
Useful when travelling / do not have access to a person	11.27%	8
Access anywhere	7.04%	5
To share knowledge	4.23%	3
Convenient / handy to share docs	4.23%	3
Retrieve lost data	2.82%	2
Can save for future use	2.82%	2
Just because I like it	2.82%	2
Collaboration of building the content	1.41%	1
Ensure evaluation process	1.41%	1
Personal benefit	1.41%	1
Saves space	1.41%	1
Not always safe	1.41%	1
No need to use	1.41%	1
Total*	100%	71

Note: Since the respondents were allowed to provide several answers this question was analyzed as a multiple response question, and thus the overall sum of percentages can exceed 100%.

Figure 6: Reasons For Using Soft Copies



As mentioned one of the reasons to use e-copies is providing an ability for collaborative work. To get a more precise estimation of respondents attitude to this type of working a special question was used in the questionnaire (Table 18). According to the results a half of the surveyed believe in preference of online collaborative work over personal meetings (n = 58, 50.9%). Another fifth (n = 25, 21.9%) feel just no difference between online or face-to-face collaborative working.

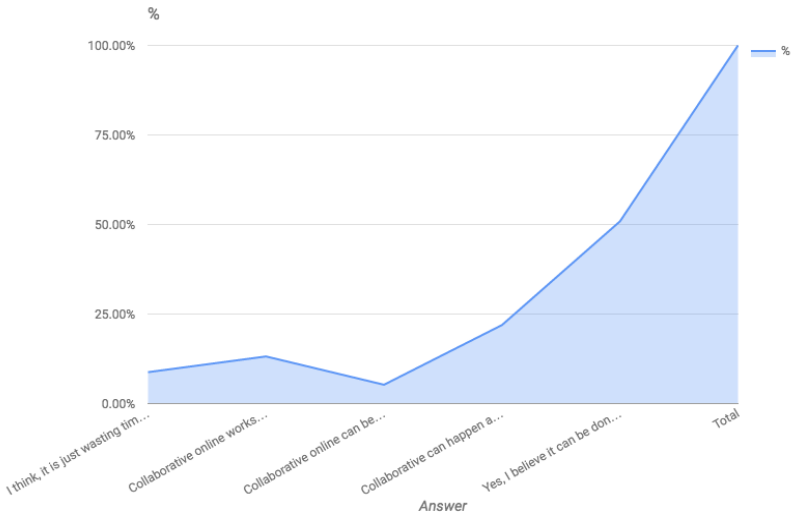
The share of the respondents who believe in effective online working within a small group only equals 13.2% (n = 15); whereas, the opposite opinion (collaborative can be useful with a large group only) share 5.3% (n = 6) respondents. Less the tenth (n = 10, 8.8%) of the participants do not believe in online collaborative working at all and prefer physical meeting.

Table 18: Preference to meet with colleagues personally for collaborative work

Answer	%	Count
I think, it is just wasting time and I believe on physical meeting to get things done	8.77%	10
Collaborative online works with a small group only	13.16%	15
Collaborative online can be useful with a large group only	5.26%	6
Collaborative can happen anywhere and there is no deference. It works for me just like physical meeting	21.93%	25
Yes, I believe it can be done through collaborative online faster than face-to-face meeting	50.88%	58
Total	100%	114

When the respondents were asked to explain their preferences concerning online collaborative working but only half of them (n = 65, 57.0%) provided a valid answer. The main reasons why respondents do not use such type of co-working was the poor Internet quality (n = 3, 4.23%)

Figure 7: Faculty Members Online Collaboration Perspective



The third set of analyses examined the indication of using 12 Google Apps (Google Drive, Google Docs, Google Slides, Google Sheets, Google Forms, Google Scholar, Google Translator, Google+, Google Hangout, Google Classroom, Google Sites and YouTube).

According to the results of overall Google Applications usage (Table 19 and Graph 2) on average the surveyed have ever used 8.5 different application from the 12 mentioned in the list. To provide an overview of the frequency of Google Application usage there are two figures described below: the overall number of respondents who have ever used the application and the frequency of usage calculated among those who use the application. Such approach permits description of usage habits for every application independently from its popularity among the participants.

Without surprising the most used apps is YouTube. Almost all of the participants have used it (n = 107, 93.9%) and they use it very often - daily was answered by almost half of the YouTube users (n = 53, 49.5%). The next group of used applications are Google Docs (n = 99, 86.8%), Google Translator (n = 98, 86.0%) and Google+ (n = 94, 82.5%). Although the total usage experience of these three applications is similar, the frequency of usage differs. The most frequently used is Google Translator (n = 65, 66.3% of its users use it 2-3 times a week and more often), then comes Google+ which is used 2 to 3 times a week by a half of its users (n = 47, 50.0%) and Google Docs is the least frequently used application among these three: only forty (40.4%) of its users use it at least 2-3 times a week, while more than a fifth of its users (n = 22, 22.3%) use Google Docs only occasionally (once a month and less).

Three fourths (n = 85, 74.6%) of the surveyed stated they have ever used Google Drive but the frequency of usage is relatively small: only 37.6% of its users (n = 32) use it at least 2-3 times a week, while a fourth of its users (n = 22, 25.9%) use it just once a month or less.

The share of those who used Google Forms, Google Scholar, Google Sites and Google Slides was almost equal varying from 79 (69.3%) to 76 (66.7%) respondents who mentioned these applications. However, analyzing the frequency of usage exposed the differences in respondents' usage behavior. Among Google Sites users, the frequency is the highest compared to all other applications: over half of its users use this application daily (n = 40, 51.3%), while Google Forms is used mostly occasionally: almost two thirds of its users (n = 50, 64.1%) do it not more than once a month. The shares of those who use Google Scholar and Google Slides frequently (2-3 times a week and more) is similar and varies from a fourth to almost a third of appropriate application users (n = 23, 30.3% for Google Slides users and n = 21, 26.6% for Google Scholar). But the share of occasional users differs: Google Slides are used once a month and less only by 23.7% (n = 18) of the respondents who have ever used this app, whereas Google Scholar is used once a month and more rarely by almost half of its overall users (n = 39, 49.4%).

The last three applications Google Hangout, Google Classroom and Google Sheets were used by over half of the participants: the shares vary from n = 65 (57.0%) to n = 62 (54.4%). Google Classroom and Sheets are used mostly occasionally with more than 40% of the answers belonging to once a month and rarer among appropriate application users (n = 28, 43.8% among Google Classroom users, n = 29, 46.8% among Google Sheets users). Google Hangout is the most rarely used application compared to all others: 40.0% (n = 26) of its users open this application less than once a month.

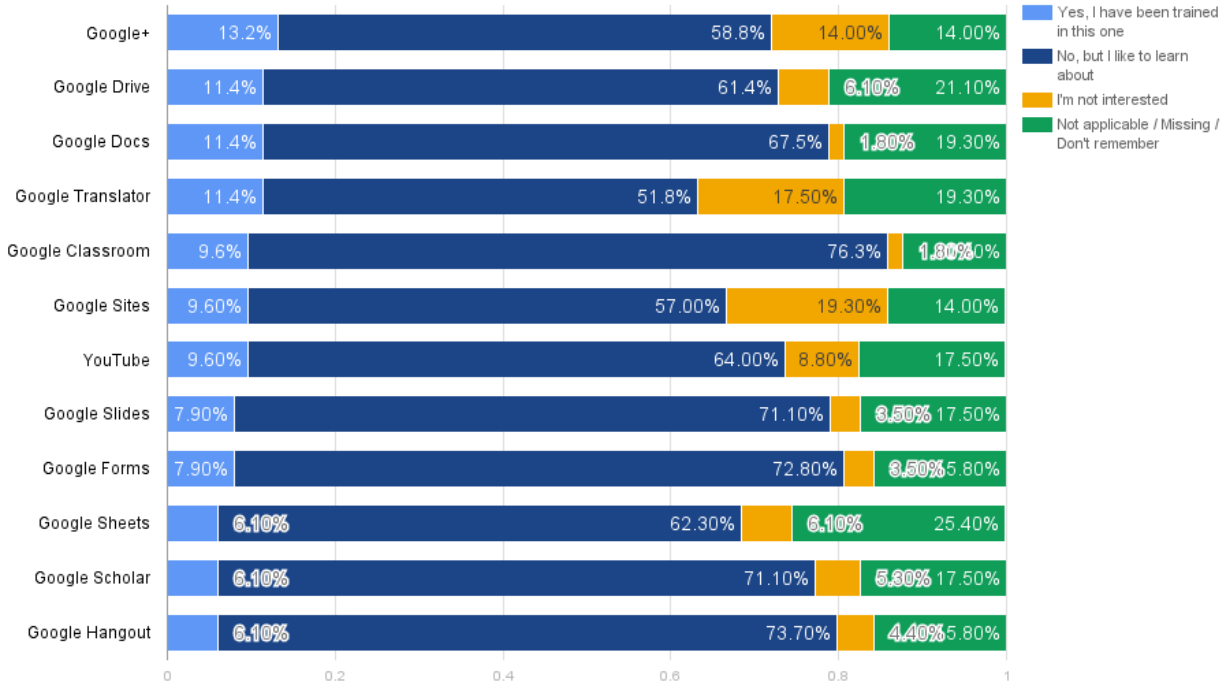
Lastly, it should be mentioned that there was one respondent who did not provide any valid answer about any of the applications: the respondent could not find the appropriate frequency of use and chose the answer (Don't know).

Table 19: Google Apps overall usage and presence of a personal account (channel, page)

	Overall usage		Personal account		
Application	%	Count	%	Count	who have ever used the app
YouTube	93.86%	107	63.16%	72	67.29%
Google Docs	86.84%	99	59.65%	68	68.69%
Google Translator	85.96%	98	45.61%	52	53.06%
Google+	82.46%	94	71.93%	82	87.23%
Google Drive	74.56%	85	58.77%	67	78.82%
Google Forms	69.30%	79	42.98%	49	62.03%
Google Scholar	69.30%	79	42.11%	48	60.76%
Google Sites	68.42%	78	50.00%	57	73.08%
Google Slides	66.67%	76	47.37%	54	71.05%
Google Hangout	57.02%	65	34.21%	39	60.00%
Google Classroom	56.14%	64	29.82%	34	53.13%
Google Sheets	54.39%	62	40.35%	46	74.19%
None / Not applicable	0.88%	1	20.18%	23	
Total	100%	114	100%	114	

Note: Since the respondents were asked to provide an answer for every application, these questions were analyzed as a multiple response (any frequency was counted in overall usage experience; every 'Yes' answer was counted in personal account usage), and thus the overall sum of percentages can exceed 100%.

Figure 8: Google Apps Usage Frequency (Adjusted to Those Who Have Ever Used The Application)



There were 91 participants (79.8%) who stated they have a personal account (channel, page) on at least one of the 12 investigated Google services. However, the most frequently used services mostly fit the list of those on which respondents have a personal account; these lists are not identical. For example, Google+ being only on the fourth place of overall usage is the leader in having personal accounts among the participants (n = 82, 71.9%); whereas, YouTube being the most used application provided personal channel only for about two thirds of the respondents (n = 72, 63.2%).

To provide a better understanding how frequently the users of every application do have a personal account in it, the analysis was focused on the shares adjusted to those who use the application. This will make the shares independent from the overall usage of the application and the comparison between different applications will be correct.

The values of adjusted percentages show a different picture compared to the overall usage. For example, Google+ being only on the fourth place in overall usage has the highest share of those who have a personal account among its users: almost all of those who have used Google+ have created an account there (n = 82, 87.2%). The next application with over three-fourths of its users having created a personal account is Google Drive (n = 67, 78.8%). Remarkably the least used application Google Sheets is on the third place for the share of personal accounts among its users (n = 46, 74.2%). Similar shares of the participants who have personal accounts among appropriate application users show Google Sites and Google Slides: almost three fourth of its users have a personal account there (n = 57, 73.1% for Google Sites and n = 54, 71.1% for Google Slides).

T-test shows that the most frequently used applications YouTube and Google Docs provided accounts only for about two thirds of their users among those surveyed (n = 68, 68.7% for Google Docs and n = 72, 67.3% for YouTube). Google Forms, Scholar and Hangout have personal accounts among approximately 60% of their users (from 60.0% to 62.8%). The last two applications in terms of the share of personal accounts among their users are Google Classroom and Translator: only half (53.1%) of their users among survey participants stated they have a personal account.

The next question was dedicated to experience and desire of extended knowledge about Google Applications among the respondents. Figure 9 provides an overview of this question showing the shares of those who have had special training and those who would like to obtain more knowledge about each of the application.

According to the results the overall share of those who had received training for each of the applications is relatively small (varying from n = 15, 13.2% for Google+ to n = 7, 6.1% for

Google Sheets, Scholar and Hangout). These small shares of those who had undergone training can explain the high shares of those who would like to receive it.

Taking into account that the participants of the survey are members of The UoB university, the list of Google Applications that are of most interest looks very logical. Around three-fourths of respondents are interested in Google Classroom, Google Hangout, Google Forms, Google Slides and Google Scholar (the numbers vary from n = 87, 76.3% to n = 81, 71.1%). Google Docs, YouTube, Google Sheets and Google Drive are interesting for about two thirds of participants (the answers vary from n = 77, 67.5% to n = 70, 61.4%).

The last three applications: Google+, Google Sites and Google Translator evoke the least interest among respondents: just over half of them (n = 67, 58.8% to n = 59, 51.8%) want to obtain special training for these apps and the share of those who are not interested in these applications is just about 40% of the total sample (from n = 16, 14.0% to n = 22, 19.3%).

Figure9: Google Application Training and Desire for More Knowledge

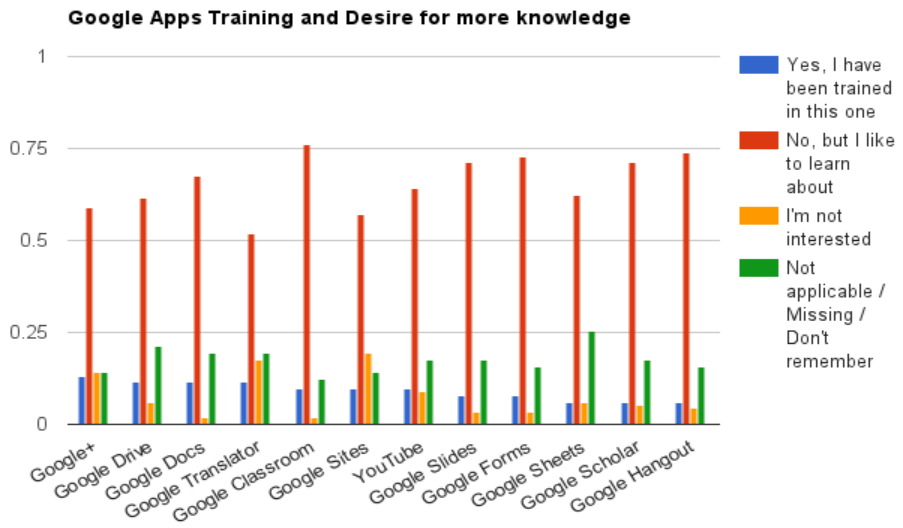


Table 20: Google Apps Training and Desire for More Knowledge

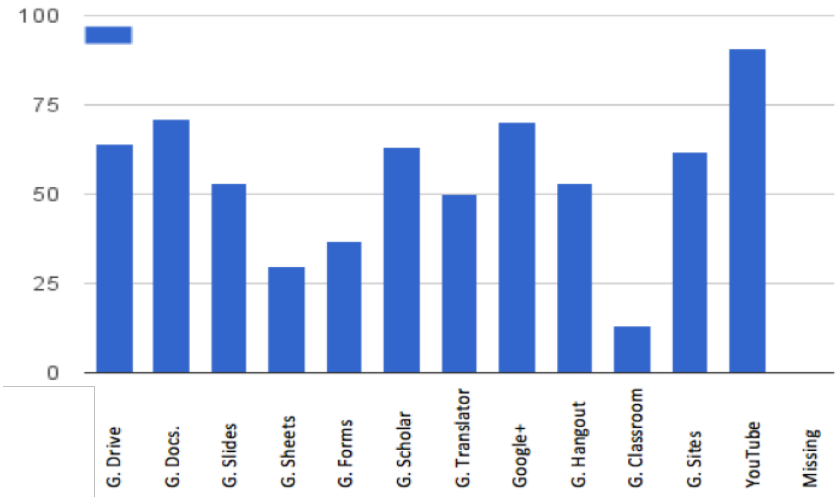
Apps	Being Trained	No, But Interested	Not Interested	Not A / Missing / Don't Remember
Google+	13.2%	58.8%	14.00%	14.00%
Google Drive	11.4%	61.4%	6.10%	21.10%
Google Docs	11.4%	67.5%	1.80%	19.30%
Google Translator	11.4%	51.8%	17.50%	19.30%
Google Classroom	9.6%	76.3%	1.80%	12.30%
Google Sites	9.60%	57.00%	19.30%	14.00%
YouTube	9.60%	64.00%	8.80%	17.50%
Google Slides	7.90%	71.10%	3.50%	17.50%
Google Forms	7.90%	72.80%	3.50%	15.80%
Google Sheets	6.10%	62.30%	6.10%	25.40%
Google Scholar	6.10%	71.10%	5.30%	17.50%
Google Hangout	6.10%	73.70%	4.40%	15.80%

The next part of the instrument investigated in depth the usage of these Apps personally and academically by asking the respondents to indicate whether they have ever used these Apps previously or currently to improve and gain more knowledge about their subjects or their teaching skills. Overall, the results in Table 21 show that half of the surveyed have used different Apps with average of 50.54, (n=114). In other words, more that 55% of the participants have used Google Drive (n=64, 56.1%), Google Scholar (n=63, 55.3%) and Google Sites (n=62, 54.4%) to improve their subject knowledge both in content and in teaching.

The percentage increases up to 60% with using Google Docs (n=71, 62.3%) and Google+ (n= 70, 61.4%), and increases even higher to reach almost 80% who benefitted from YouTube (n=91, 79.8%). However, only 45% or less have benefited from Google Slides as same as Hangouts (n=53, 46.5%) and Google Translator (n=50, 43.9%) as seen in Table 21. Furthermore,

a third of the respondents have used Google Forms (n=37, 32.5%) and about one-fourth used Google Sheets (n=30, 26.1%), while only 13 members (n=13) have utilized Google Classroom which equals 11.4% of the total population.

Figure 10: Previously Used Google Apps in Improving Discipline knowledge



No increase in utilizing Google Classroom was detected in current usage neither (n=13, 11.4%) as Table 22 presents nor in YouTube (n= 91, 79.8%) so far. However; both Apps remained as the lowest and highest rank percentage among others. The same case occurs with no increase noticed with Google Drive which has equally the same status (n= 64, 56.1%), while the majority of current usages have been decreased with different percentages compared with previous use in Table 21.

Figure 10 shows the reduction between past and current use of these Apps. For instance, Google Docs (n= 64, 56.1%), Slides (n= 55, 48.2%), Sheets (n= 24, 21.1%), Forms (n= 30, 26.3%), Scholar (n= 60, 52.6%), Translator (n= 48, 42.1%), and Hangout (n= 45, 39.9%) all have been used less than currently, while only two Apps, Google Sites (n= 55, 48.2%) and Google+ (n= 79, 69.3%), slightly increased.

Table 21: Previously Used of Google Apps in Improving Discipline Knowledge

	Google Apps	Count	Column N %
Q23	Google Drive	64	56.1%
	Google Docs	71	62.3%
	Google Slides	53	46.5%
	Google Sheets	30	26.3%
	Google Forms	37	32.5%
	Google Scholar	63	55.3%
	Google Translator	50	43.9%
	Google+	70	61.4%
	Google Hangout	53	46.5%
	Google Classroom	13	11.4%
	Google Sites	62	54.4%
	YouTube	91	79.8%
	None	0	0.0%
	Total	114	100.0%

A closer inspection of the data in Table 23, shows that most of those surveyed have employed YouTube (n=94, 82.5%), Google+ (n=67, 58.8%) and or Google Docs (n=66, 57.9%) to improve their teaching skills in the past. Furthermore, 40% of the participants have used Google Drive, Google Sites, Google Slides or Google Scholar for the same purpose (n= 57, 50.0%; n= 56, 49.1%; n= 52, 45.6% and/or n= 47, 41.2%, respectively).

Table 22: Currently usage of Google Apps in improving Discipline knowledge

	Google Apps	Count	Column N%
Q24	Google Drive	64	56.1%
	Google Docs	64	56.1%
	Google Slides	55	48.2%
	Google Sheets	24	21.1%
	Google Forms	30	26.3%
	Google Scholar	60	52.6%
	Google Translator	48	42.1%
	Google+	79	69.3%
	Google Hangout	45	39.5%
	Google Classroom	13	11.4%
	Google Sites	55	48.2%
	YouTube	91	79.8%
	None	4	3.5%
	Total	114	100.0%

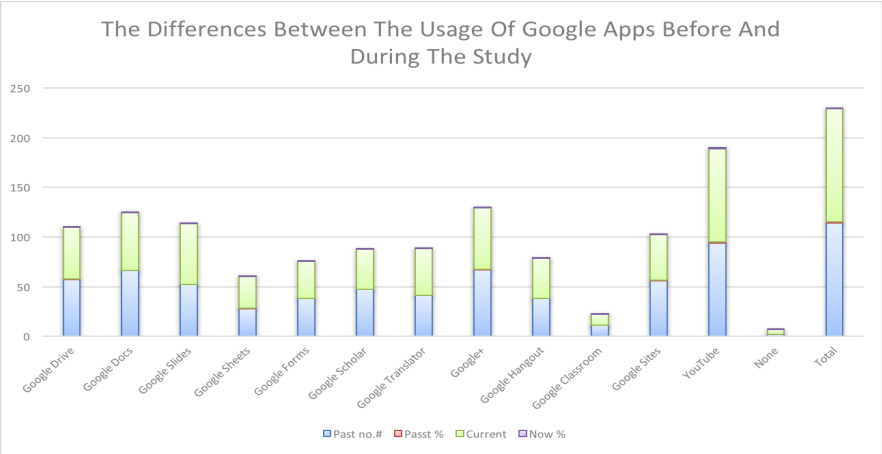
About one-third of the people said that their Teaching Skills were improved due to using Google Translator (n=41, 36%), Google Forms (n=38, 33.3%), and/or Google Hangout (n=38, 33.3%). Only 28 (24.6%) and 11 (9.6%) participants of the study benefitted from working with Google Sheets and Google Classroom. Only 2 persons (1.8%) have never applied any Google Apps for improving their teaching skills as seen in Table 23.

Table 23: Improving Teaching Skills by Utilizing Google Apps Previously

	Google Apps	Count	Column N%
Q25	Google Drive	57	50.0%
	Google Docs	66	57.9%
	Google Slides	52	45.6%
	Google Sheets	28	24.6%
	Google Forms	38	33.3%
	Google Scholar	47	41.2%
	Google Translator	41	36.0%
	Google+	67	58.8%
	Google Hangout	38	33.3%
	Google Classroom	11	9.6%
	Google Sites	56	49.1%
	YouTube	94	82.5%
	None	2	1.8%
	Total	114	100.0%

Figure 11 reflects the results of t-test that shows the differences between the usage of Google Apps before and during the study. It is obvious that members are utilizing Hangout, Translator, Sheets, and Slides more often, while they do not do so with Drive, Docs, Sites, Scholar, nor Forms.

Figure 11: The Differences Between Usage of Google Apps Before and During the Study



More than half of those surveyed improved their teaching skills currently using YouTube (n=94, 82.5%), Google+ (n=62, 54.4%), Google Slides (n=61, 53.5%) and/or Google Docs (n=58, 50.9%) (Table 24). About forty percent of the participants currently employ the same tasks of Google Drive (n=52, 45.6%), Google Translator (n=47, 41.2%), and Google Sites (n=46, 40.4%). In addition, about one-third of the people utilize Google Scholar (n=40, 35.1%) and/or Google Forms (n=37, 32.5%); however, about one-fourth employ Google Sheets (n=32, 28.1%). Only 11 members (9.6%) used Google Classroom, and 5 people (4.4%) currently do not utilize any Google applications to improve their teaching skills.

Table 24: Improving Teaching Skills by Utilizing Google Apps Currently

	Google Apps	Count	Column
Q26	Google Drive	52	45.6%
	Google Docs	58	50.9%
	Google Slides	61	53.5%
	Google Sheets	32	28.1%
	Google Forms	37	32.5%
	Google Scholar	40	35.1%
	Google Translator	47	41.2%
	Google+	62	54.4%
	Google Hangout	40	35.1%
	Google Classroom	11	9.6%
	Google Sites	46	40.4%
	YouTube	94	82.5%
	None	5	4.4%
	Total	114	100.0%

Totally, roughly 40% of users participated in the study were satisfied (n=28, 24.6%) and very satisfied (n=17, 14.9%) with Google services/Apps provided at The UoB (Table 25). One-fourth of respondents were dissatisfied (n=16, 14%) and very dissatisfied (n=10, 8.8%) with Google services and its educational Apps. While 32 participants (28.1%) had a neutral opinion about those Apps, almost 10% percent of them, (n = 11, 9.6%) have nothing to say but replied with "I don't know". Their unusual answer could be just random feedback to move to the next question, or it may explain why 6.2% of them did not benefit from these Apps and Google services at all this year.

Table 25: Satisfaction Level of Google Apps / Services at The UoB

		Frequency	Percent	Valid Percent	Cumulative Percent
Q27	Don't Know	11	9.6	9.6	9.6
	Very Satisfied	17	14.9	14.9	24.6
	Satisfied	28	24.6	24.6	49.1
	Neutral/Not Sure	32	28.1	28.1	77.2
	Dissatisfied	16	14.0	14.0	91.2
	Very Dissatisfied	10	8.8	8.8	100.0
	Total	114	100.0	100.0	

Respondents indicated that when they are looking for more information on a new subject, 89 participants (78.1%) employ YouTube, and more than half of them utilize Google Docs (n= 69, 60.5%), Google Slides (n= 68, 59.6%), Google Scholar (n= 64, 56.1%), Google+ (n= 64, 56.1%), Google Sites (n= 61, 53.5%), Google Drive (n= 58, 50.9%) or/ and Google Translator (n= 58, 50.9%).

In Table 26 less than 41% of the same group used Google Classroom (n=46, 40.4%), Google Forms (n=40, 351.1%), Google Hangout (n=32, 28.1%) or/and Google Sheets (n=28, 24.6%). 5.3 % of the participants preferred to use the "traditional way" to get more information on new interesting subjects (n = 6) and do not use any Google App to obtain more information. See Table 26. "Traditional way" means having the hard copy of the resources by going to the libraries, attending related meetings physically, or meeting experts individually.

Table 26: Obtaining Google Apps to Get more Information on New Subjects

		Count	Column N %
Q28	Google Drive	58	50.9%
	Google Docs	69	60.5%
	Google Slides	68	59.6%
	Google Sheets	28	24.6%
	Google Forms	40	35.1%
	Google Scholar	64	56.1%
	Google Translator	58	50.9%
	Google+	64	56.1%
	Google Hangout	32	28.1%
	Google Classroom	46	40.4%
	Google Sites	61	53.5%
	YouTube	89	78.1%
	None	6	5.3%
	Total	114	100.0%

The instrument gave participants the opportunity to explain in short paragraph the reasons for choosing Google Apps for self-education. Forty-three users (37.7%) provided the following reasons: “they are an easier way to reach the knowledge” (n = 5, 4.4%); “the opportunity to view the databases and new research in the specialty (Google Scholar), and a fast and simple platform (YouTube) to share the opinions of scientists and students about the issues” (n = 3, 2.6%). Besides, there were statements that were supported by two people (n = 2, 1.8% for each statement): “they provide with the needed information and sources”; “Google tools are the very best Apps”; “Google tools are the pretty, easy and faster Apps, showing a huge information in short time”; “they are very helpful to search”; “Apps allow to find a lot of data with different references and formats, while videos are helpful to practice and learn online”; “I used to use

these apps"; "these Apps help in preparation of my lectures"; "they contain a considerable amount of information and used by most people"; "they clearly and sufficiently explain unclear points"; "these Apps allow to get every information related to the topic, whether it is new or old"; "the tools provide knowledge fast and when necessary". 8 participants (14.4%) provided confused comments that are difficult to interpret. For example "happy face", "D.K. [Don't Know]", and "just because".

Table 27: Sharing Scientific Thoughts and/or Personal Perspectives about Related Academic Topics in The Past

	Apps	Count	Column N %
Q30	Google Drive	53	46.5%
	Google Docs	48	42.1%
	Google Slides	44	38.6%
	Google Sheets	29	25.4%
	Google Forms	33	28.9%
	Google Scholar	50	43.9%
	Google Translator	44	38.6%
	Google+	49	43.0%
	Google Hangout	31	27.2%
	Google Classroom	30	26.3%
	Google Sites	38	33.3%
	YouTube	62	54.4%
	None	26	22.8%
	Total	114	100.0%

The participants of the study were also asked about their most recent experience in current semester, using Google Apps for sharing scientific thoughts and/or personal perspectives

about related academic topics (Table 28). Less than a half of the respondents used YouTube (n=55, 48.2%) or/and Google Drive (n=47, 41.2%). Roughly one-third of the people utilized Google Docs, Google+, Google Sites and/ or Google Slides in the current semester; about one-fourth of the faculty used Google Translator, Google Scholar and/ or Google Classroom in related academic topics. Also, about one-fifth of the surveyed were benefitting from Google Sheets, Google Hangout and/ or Google Forms in their semester. Nevertheless, less than one-third of the respondents did not use any Google Apps for sharing scientific thoughts and/or personal perspectives about related academic topics in current semester see Table 28.

Table 28: Sharing Scientific Thoughts and/or Personal Perspectives about Related Academic Topics in Current Semester

	Apps	Count	Column N %
Q31	Google Drive	47	41.2%
	Google Docs	42	36.8%
	Google Slides	36	31.6%
	Google Sheets	21	18.4%
	Google Forms	19	16.7%
	Google Scholar	27	23.7%
	Google Translator	33	28.9%
	Google+	41	36.0%
	Google Hangout	21	18.4%
	Google Classroom	26	22.8%
	Google Sites	38	33.3%
	YouTube	55	48.2%
	None	36	31.6%
	Total	114	100.0%

The survey showed that about forty percent of them have utilized Google Drive, Google Docs and/or YouTube to discuss related academic topics with other colleagues locally or internationally; about thirty percent of the faculty employed Google Slides or/and Google+; one-fourth of the respondents have used Google Sites, Google Scholar or/and Google Translator; one-fifth of the participants have relied on Google Sheets or/and Google Forms. Surprisingly, Google Classroom and Google Hangouts have been applied for discussion of academic topics with colleagues by the lowest number of the faculty (see Table 29).

Almost 40 percent of the academic users in the study have never employed any Google Apps to discuss related academic matter with other academics.

Table 29: Using Google Apps to Discuss Related Academic Topics with Colleagues

	Apps	Count	Column N %
Q32	Google Drive	47	41.2%
	Google Docs	47	41.2%
	Google Slides	36	31.6%
	Google Sheets	23	20.2%
	Google Forms	23	20.2%
	Google Scholar	27	23.7%
	Google Translator	29	25.4%
	Google+	34	29.8%
	Google Hangout	15	13.2%
	Google Classroom	19	16.7%
	Google Sites	30	26.3%
	YouTube	42	36.8%
	None	45	39.5%
	Total	114	100.0%

When the researcher attempted to get more information about participants' reasons of use, eighteen of them (n = 18, 16.8%) mentioned some realistic reasons such as: "experiencing these Apps more than others"; "these Apps give them the speed in communicating with other colleagues to get the required information"; "the simplicity of use, accuracy at work, as well as reducing effort and time".

Also, 5.3% mentioned other reasons like exchanging ideas and applying what is beneficial to the educational process, supporting goals purposes, and gathering very good members and forming healthy academic communities around the world (n = 6). On the other hand, 10 % replied by "there are no reasons to use it" (n = 10), and two members see themselves as good users of such particular Apps. (n = 2, 2.6%), while twenty members of the total respondents ignored responding (n = 21, 20.2%). This is reported as missing data which becomes the biggest missing data so far that reached almost 43% in the study.

It is worthwhile to mention that people who work in academia actively rely on using Google Apps for communication with their local and international colleagues. More than one-third of academics employ Google Drive, Google Docs and/ or YouTube. Another 30% of the faculty members interact with colleagues via Google Sites, Google Slides or/and Google+; and one-fourth or so of the participants use Google Translator and/or Google Forms for the same purpose.

Roughly one-fifth of the respondents communicate with the help of Google Scholar or/and Google Sheets, while only 14.9% of the tested academic members use Google Classroom for communication purposes. 42.1% participants do not use Google Apps to interact with colleagues locally or internationally.

Table 30: Interacting with Colleagues for Academic Subjects

	Apps	Count	Column N %
Q35	Google Drive	44	38.6%
	Google Docs	40	35.1%
	Google Slides	34	29.8%
	Google Sheets	21	18.4%
	Google Forms	27	23.7%
	Google Scholar	23	20.2%
	Google Translator	31	27.2%
	Google+	34	29.8%
	Google Hangout	27	23.7%
	Google Classroom	17	14.9%
	Google Sites	36	31.6%
	YouTube	38	33.3%
	None	48	42.1%
	Total	114	100.0%

The faculty members who participated in the study suggested that some Google Tools/Apps could be useless as Table 31 shows, and about one-fourth of the respondents said that Google Forms, Google Slides, Google Docs and/or Google Hangout are not beneficial. One-fifth of respondents had the same opinion about Google Sheets, Google Drive and/ or Google Classroom, and less than 18% had the same impression about other Google Apps. Only 8 respondents (7%) claimed uselessness of YouTube. Almost 40% think that none of Google Apps are not beneficial.

Some people could not explain why they suggested that some Google Apps are not beneficial: Google Drive (n = 15. 13.2%), Google Docs (n =15, 13.2%), Google Slides (n=14,

12.3%), Google Sheets (n = 8, 7%), Google Forms (n = 8, 7%), Google Scholar (n = 12, 10.5%), Google Translator (n = 9, 7.9%), Google+ (n = 8, 7%), Google Hangout (n = 9, 7.9%), Google Classroom (n = 8, 7%), Google Sites (n = 7, 6.1%), YouTube (n = 8, 7%).

Other reasons were: "an absence of an account" (Google Drive, n = 9, 7.9%); "using as mass storage tool" (Google Drive, n = 2, 1.8%); "it did not contribute anything into the field by anything yet" (Google Docs, Google Slides, Google Forms, Google Sheets; n = 9, 7.9% for each tool); "compare it to Microsoft office, they are desperate" (Google Docs, n=1, 0.9%), "it obviates others" (Google Slides, n=1, 0.9%), "it's not beneficial for me" (Google Hangout, Google Sites; n = 9, 7.9% for each tool; Google Slides, Google Translator; n = 1, 0.9% for each tool); "not so familiar with it" (Google Sheets, Google Forms, Google Scholar; n = 2, 1.8% for each tool), "it does not seem useful in Art or educational fields right now" (Google Sheets, n = 2, 1.8%); "it's not clear for me" (Google Forms, n = 5, 4.4%), "I don't know many things about it" (Google Forms, n = 2, 1.8%); "it assists the academic field" (Google Scholar, Google Translator YouTube; n = 5, 4.4% for each tool); "it social" [sic.] (Google Translator, Google Translator, Google+; n = 1; 0.9% for each tool); "I don't even use it at all" (Google+, n = 9, 7.9%); "it makes the mind not focused" (Google Hangout, n = 4, 3.5%), "it lacks of essential elements" (Google Hangout, n =1, 0.9%); "I don't know how to use it" (Google Classroom, n = 9, 7.9%); "duplicated, nothing new" (Google Sites, n = 1, 0.9%).

Table 31: Faculty Members Impression about Google Apps

Google Apps		Count	Column N %
Q36	Google Drive	23	20.2%
	Google Docs	28	24.6%
	Google Slides	30	26.3%
	Google Sheets	24	21.1%
	Google Forms	31	27.2%
	Google Scholar	14	12.3%
	Google Translator	16	14.0%
	Google+	19	16.7%
	Google Hangout	27	23.7%
	Google Classroom	23	20.2%
	Google Sites	20	17.5%
	YouTube	8	7.0%
	None	45	39.5%
	Total	114	100.0%

Overall, more than two-thirds of the participants expressed fair satisfaction (37.7%) or high satisfaction (34.2%) about the improvement they gained from Google Apps. Just 16.7% of the repliers said they were neither satisfied nor dissatisfied with their improvement gained from using Google Apps; less than 5% of the users were somewhat dissatisfied (n=2, 1.8%) or very dissatisfied (n=3, 2.6%) with this experience as it is seen in Table 32.

Table 32: Faculty Members Improvement Satisfaction Gained from Google Apps

	No answer	8	7.0%
Q37	Very Satisfied	39	34.2%
	Fairly Satisfied	43	37.7%
	Neither Satisfied nor Dissatisfied	19	16.7%
	Somewhat Dissatisfied	2	1.8%
	Very Dissatisfied	3	2.6%
	Total	114	100.0%

Substantially, about a half of the respondents provided comments why they are satisfied or dissatisfied with the improvement they gained from Google tools: "the weakness of the network and not providing adequate training, and free services for members like paid Internet" (n = 6, 5.3%); "My environment that does not pay much attention to these applications, they use traditional methods that reducing the impact of this modern applications" (n = 5, 4.4%); "the majority of users are using English daily, it helps me a lot in my major and related subjects" (n = 2, 1.8%); "the lack of experience, weakness of the network and not providing adequate training, and costly Internet access" (n = 2, 1.8%); "sometimes the translation is not good" (n = 2, 1.8%); "most of the time we use Google to search any kind of knowledge, news, pictures etc, it is very helpful, I use this app to translate and download files of various format related to my course" (n = 2, 1.8%), (n = 2, 1.8%); "I am fairly satisfied" (n = 2, 1.8%); "Hopefully we get training on these apps by the university" (n = 2, 1.8%); "Happy to use Google Apps" (n = 2, 1.8%).

Moreover, two-thirds of the participants had past experience in using Google Apps for sharing, interacting or discussing relevant topics inside a classroom (see Table 33). Half of the individuals of the study used YouTube, which was the most demanded tool in this category. Roughly one-third of people employed Google Docs, Google Translator, or/and Google Drive; about one-fourth of the group employed Google Slides or/and Google Sites; one-fifth had experience with past use of Google Classroom, Google+ or/and Google Scholar; less than 17%

of the participants utilized in the past Google Hangout, Google Sheets or/and Google Forms. Almost 37% of the respondents did not use any Google Apps in the past in a classroom for sharing, interacting or discussing relevant topics (see Table 33).

Table 33: Past Use of Google Apps Inside Classroom (Sharing, Interacting or Discussing relevant topics):

	Google Apps	Count	Column N %
Q38	Google Drive	37	32.5%
	Google Docs	42	36.8%
	Google Slides	31	27.2%
	Google Sheets	18	15.8%
	Google Forms	14	12.3%
	Google Scholar	24	21.1%
	Google Translator	38	33.3%
	Google+	26	22.8%
	Google Hangout	19	16.7%
	Google Classroom	26	22.8%
	Google Sites	30	26.3%
	YouTube	50	43.9%
	None	42	36.8%
	Total	114	100.0%

In general, many respondents said they refer students to Google Apps to learn from, react to, or discuss relevant content (see Table 34). More specifically, YouTube is the most referred tool (n=66, 57.9%), and more than one-third of the participants recommend it to their students for the same purposes Google Translator, Google Docs or/and Google Drive; about one-fourth of the people refer to Google Slides, Google Scholar or/and Google Classroom; one-fifth of the group Google+, Google Sheets, Google Forms (see Table 34). Google Hangout was the least

referred tool to learn from, react to, or discuss relevant content (17.5%). Yet, one-third of the those surveyed do not refer any Google App for these purposes.

From another side, 55 respondents (48.2%) indicated their specific reasons why they do not use Google Apps in the classroom. 9 users (7.9%) claimed that the curriculum has more than enough references that cover the scientific content. Other comments included: “apps are not felt needed” (n = 4, 3.5%); “we use traditional tools like whiteboard and books” (n = 4, 3.5%); “my University infrastructure and student knowledge do not support this”.

Technology needs to be upgraded in the University and students should be trained”; “like to share other thoughts & pronunciation from other countries and discuss that with learners from time to time”; “I am a good user of these apps”; “apps are easy for the teacher and the students”; and “attractive to the learners” was supported by two participants (n = 2, 1.8% for each statement); “who needs them if he has Microsoft office”; “the poor of internet availability made these apps unuseful [sic.] for students”; “the missing of internet in the classroom”; “the lack of students’ participation the lack of students participations”; “the lack of internet”; “the difficulty to communicate with all”; “I am not experienced in some of them yet”; “Not commensurate with my goals nor with the available teaching methods that fit well with our curriculum”; “just because”; “it's not available for students... so, it's hard to apply and benefit from it”; “ignorance” (n = 1, 0.9%). Also, there are three respondents (2.7%) said “nothing to be mentioned”. Unfortunately, 13 users (11.7%) provided comments that are difficult to interpret.

Table 34: Referring Students to Google Apps to Learn From, React to, or Discuss Relevant Content

	Google Apps	Count	Column N %
Q40	Google Drive	41	36.0%
	Google Docs	43	37.7%
	Google Slides	31	27.2%
	Google Sheets	22	19.3%
	Google Forms	22	19.3%
	Google Scholar	30	26.3%
	Google Translator	42	36.8%
	Google+	24	21.1%
	Google Hangout	20	17.5%
	Google Classroom	28	24.6%
	Google Sites	38	33.3%
	YouTube	66	57.9%
	None	38	33.3%
	Total	114	100.0%

More than half of the participants (n=60, 52.6%) said that they do not use Google Apps in testing and assessment procedures (Table 35). Most of the users of Google Apps employ YouTube (n=33, 28.9%) or/and Google Sites (n=31, 27.2%). More than 20% use for testing and assessment Google Slides (24.6%), Google+ (22.8%), Google Docs (22.8%), Google Translator (21.1%), Google Classroom (21.1%), and/ or Google Drive (20.2%). Other Apps were employed for the same purposes less frequently (by 14% people or less). Google Hangout was the least frequently used Google App (8.8%) in this category (see Table 35).

Table 35: Integrating Google Apps in Testing And Assessment Procedures

Q 41	Google Drive	23	20.2%
	Google Docs	26	22.8%
	Google Slides	28	24.6%
	Google Sheets	14	12.3%
	Google Forms	16	14.0%
	Google Scholar	14	12.3%
	Google Translator	24	21.1%
	Google+	26	22.8%
	Google Hangout	10	8.8%
	Google Classroom	24	21.1%
	Google Sites	31	27.2%
	YouTube	33	28.9%
	None	60	52.6%
	Total	114	100.0%

The respondents have various Levels of Skills in Creating Content with using different Google Apps (see Table 36). The highest numbers of users (more than 55%) had an expert, above average or average level of skills in YouTube, Google Sites, Google Drive and Google Docs. The lowest numbers of respondents possessed expert, above average or average skills in Google Hangout, while the highest portion of the participants (35.1%) have none or little skills in using this Google App. Moreover, 40.4% of the users did not provide a reply about their level of skills in Google Hangout (Table 36). Surprisingly, the maximum number of the people (47.4% in each case), did not answer the question about their Level of Skills in Creating Content with using Google Scholar or Google Translator (see Table 36).

Table 36: Level of Skills in Creating Content

Apps	Not A / No answer		Expert		Above average		Average		Beginner		Unable		Total	
	no#	%	#	N %	#	N %	#	N %	#	N %	#	N %	#	N %
G.Drive	29	25.4%	13	11.4%	35	30.7%	7	6.1%	11	9.6%	19	16.7%	114	100.0%
G.Docs	31	27.2%	16	14.0%	36	31.6%	3	2.6%	9	7.9%	19	16.7%	114	100.0%
G.Slides	35	30.7%	13	11.4%	33	28.9%	3	2.6%	6	5.3%	24	21.1%	114	100.0%
G.Sheets	33	28.9%	9	7.9%	25	21.9%	11	9.6%	8	7.0%	28	24.6%	114	100.0%
G.Forms	36	31.6%	11	9.6%	23	20.2%	15	13.2%	3	2.6%	26	22.8%	114	100.0%
G.Scholar	54	47.4%	15	13.2%	21	18.4%	5	4.4%	7	6.1%	12	10.5%	114	100.0%
G.Translator	54	47.4%	17	14.9%	27	23.7%	4	3.5%	2	1.8%	10	8.8%	114	100.0%
Google+	29	25.4%	23	20.2%	33	28.9%	9	7.9%	5	4.4%	15	13.2%	114	100.0%
G. Hangout	46	40.4%	3	2.6%	18	15.8%	7	6.1%	14	12.3%	26	22.8%	114	100.0%
G.Classroom	44	38.6%	13	11.4%	17	14.9%	5	4.4%	13	11.4%	22	19.3%	114	100.0%
G. Sites	37	32.5%	17	14.9%	26	22.8%	3	2.6%	5	4.4%	26	22.8%	114	100.0%
YouTube	33	28.9%	21	18.4%	31	27.2%	13	11.4%	5	4.4%	11	9.6%	114	100.0%

YouTube was a top-rated Google App in the category of improved efficiency, productivity and other teaching operations in the classroom. About half of the participants said that YouTube improves efficiency, productivity, and other teaching operations in their classroom with their ratings: very well (n=23, 20.2%), well (n=25, 21.9%) or somehow (n=10, 8.8%) (see Table 36). Only 15% agreed that the same App is not that much (n=11, 9.6%) or nothing notable (n=5, 4.4%) helpful for this purpose, while 40 (35.1%) participants provided no answer. Google Drive, Google Docs, Google Slides and Google Sites were lower but still high rates by this criterion, while other Google Apps were mid-rated and lower rated; Google Hangout, Google Forms and Google Classroom were the most poor-rated Google Apps in this category (see Table 36).

The highest numbers of participants did not provide an answer about the role of Google Translator (n=63, 55.3%), Google Hangout (n=59, 51.8%) and Google Forms (n=57, 50.0%)

among other Google Apps in improving efficiency, productivity and teaching operations in classrooms.

Table 37: Improving Efficiency, Productivity and Teaching Operations

Apps	Not A / No answer		Very well		Good		Somehow		Not that much		Nothing notable		Total	
	#	N %	#	N %	#	N %	#	N %	#	N %	#	N %	#	N %
G. Drive	35	30.7%	17	14.9%	25	21.9%	6	5.3%	12	10.5%	19	16.7%	114	100.0%
G. Docs	37	32.5%	16	14.0%	26	22.8%	4	3.5%	11	9.6%	20	17.5%	114	100.0%
G. Slides	39	34.2%	14	12.3%	22	19.3%	6	5.3%	13	11.4%	20	17.5%	114	100.0%
G. Sheets	50	43.9%	11	9.6%	13	11.4%	7	6.1%	13	11.4%	20	17.5%	114	100.0%
G. Forms	57	50.0%	9	7.9%	10	8.8%	4	3.5%	14	12.3%	20	17.5%	114	100.0%
G. Scholar	51	44.7%	13	11.4%	12	10.5%	7	6.1%	25	21.9%	6	5.3%	114	100.0%
G. Translator	63	55.3%	15	13.2%	12	10.5%	11	9.6%	7	6.1%	6	5.3%	114	100.0%
Google+	48	42.1%	11	9.6%	14	12.3%	8	7.0%	15	13.2%	18	15.8%	114	100.0%
Google Hangout	59	51.8%	7	6.1%	8	7.0%	4	3.5%	12	10.5%	24	21.1%	114	100.0%
G. Classroom	53	46.5%	5	4.4%	12	10.5%	8	7.0%	12	10.5%	24	21.1%	114	100.0%
G. Sites	44	38.6%	17	14.9%	19	16.7%	2	1.8%	10	8.8%	22	19.3%	114	100.0%
YouTube	40	35.1%	23	20.2%	25	21.9%	10	8.8%	11	9.6%	5	4.4%	114	100.0%

Seventy-six respondents (66.7%) provided additional comments. Five persons (4.4%) said that they have "an unruly desire in applying these applications in the academic teaching rather than traditional tools"; "hope that the university provides faculty members with short training on these very useful applications"; "this survey was thoughtful and accurate, I learned from it a lot". Three participants (2.6%) additionally express their high satisfaction with using the Google educational apps. Three other individuals (2.6%) said they have nothing to comment.

Two people wrote a short paragraph commenting on Google Apps and the survey: "The instrument is so long. There is some redundancy in some questions. Some Apps are usually used in online courses, and are not applicable to face to face classes. Some Saudi Universities do not use their LMS (even when they have ones). Sometimes we prefer other apps to use for our tasks and do not use Google Apps (e.g, you now are using Qualtrics while you could have used Google

Forms). Overall, you did a great study, which is expected to contribute a lot to Saudi Universities and education in the country."

There were 15 (13.5%) individual positive and negative statements about the study (n =1, 0.9% per statement): "we wish to improve Google educational services in the colleges"; "nothing to be mentioned"; "not accurate"; "just because"; "I used many services"; "I hope to apply what has been mentioned in this study on the students in order to improve the educational process and provide them with the necessary skills and to diversify their cultures and acquiring the necessary values for a better learning skills"; "Google products are like Chinese products exported to the 3rd world, educate students about the importance of blended learning courses and give them some intensify [sic.] training because some of them are so ignorant"; etc. 11 participants (9.7%) provide unclear comments.

Summary of Results

This chapter discusses the results of the instrument. All responses are documented. Responses to open-ended questions are recorded. We turn now to a discussion of these results along with limitations and recommendations for further study.

CHAPTER 5: DISCUSSION AND CONCLUSION

This chapter discusses survey data obtained from the research questions using Google Apps by academic personnel (faculty members) from The University of Bisha (UoB). The chapter also discusses limitations of the conducted research, useful recommendations for future investigations, and conclusion.

The purpose of this study was to investigate how faculty members in The University of Bisha in Saudi Arabia benefit from using available Google academic and nonacademic or common applications in academic activities: teaching, communication with students and colleagues, and self-education, etc. The complex survey-based study provided new information on which Google tools are used and how frequently they are employed by university's academic instructors and professors, what apps are on high or low demand and why, and what reasons for using or refusing Google apps by members of The UoB faculty and academic staff.

This study was conducted according to the research plan which included the three main questions:

1) In what way is the instructors' views at The University of Bisha (UoB) about using Google Apps influencing subject matter and teaching improvement?
2) What issues - positive or negative- do The UoB faculty members have regarding the varieties of Cloud computing and, specifically, Google Academic Applications?
3) What are The UoB instructors' experiences in using Google Academic Apps in higher education?

Question 1: In what way is the instructors' views at The University of Bisha (UoB) about using Google Apps influencing subject matter and teaching improvement?

This study collected and analyzed various understandings, experiences, views and beliefs from academic staff and faculty of The UoB on employing Google Apps for academic and teaching purposes. According to the findings of this study, instructors' backgrounds and experiences impacted their use of Google Apps for teaching improvement. All respondents from The UoB were fairly skilled, experienced or highly experienced in using the computer and Internet; specifically, they had 5 to10 years of experience in using a computer and 5 to 15 years of Internet usage. The majority of the participants were very active, active or moderate users of social media websites and their tools, while just one-ninth of respondents from The UoB self-estimated their activity in social networking as inactive. Almost the same situation was the familiarity of the study participants with the concept of cloud computing and its tools. Four-fifths of the professors, lecturers, teaching assistants and other instructors were either fairly or very satisfied with their online communication. Most of the respondents do share their documents via Internet.

The situation was significantly different in regard to offering online teaching; only three-fifths of participating academic instructors taught from one to five computer-based online courses at the moment of the interview, while two-fifths of academic staff and faculty did not teach any online courses. According to this information, I conclude that having the general skills in the use of computers, Internet tools, virtual social networking, etc. by the faculty and other academic staff members does not guarantee that all or any of these skills are employed in academic activities, particularly, for teaching online courses. Nevertheless, analysis of the

obtained data showed that there are some prerequisites for using computer and Internet-based skills for teaching; these factors are discussed below.

Merging people into multiple groups according to their computer and internet usage backgrounds, allowed me to analyze how The UoB academic instructors' views affect their ability to employ Google Apps in improving their teaching, organizing, communicating, self-educating and other academic and nonacademic activities.

The obtained data allowed me to suggest that The UoB faculty and academic staff members who don't teach online courses were the people who had a lack of necessary skills and knowledge in using online tools. This observation is indirectly confirmed by 118 instructors who did not offer any online courses to the number of people who experienced a lack of skills in employing Google applications. For example, almost two-fifths of participants skipped the question about preferences and frequency of sharing documents through the Internet, while another fifth provided cogent answers (saving time, easiness of use, the safety of the service, etc.).

I consider this "skipping" a result of an absence of necessary knowledge in answering the question. Indeed, there were only two participants who barely used e-copies and provided a valid answer about the reasons. Another example, which indirectly confirms this observation is associated with The UoB instructors' views on the online collaborative working. Only three-fifths of the respondents in The UoB provided a valid answer explaining preferences concerning online collaborative working. This means that two-fifths of the participants have an incorrect opinion about these Google Apps. One can notice that this number coincides with the portion of faculty and academic staff in The UoB who teach students using online class formats.

To directly confirm that having advanced skills in using Google applications affects The UoB instructors' views, I looked into the primary data. Indeed, the group of participants with low or zero skills in all or many Google applications approximately coincided with the Google Apps deniers who had the incorrect views/ beliefs about using all or some Google Apps in teaching improvement and did not teach online classes. And vise versa, The UoB professors, lecturers and teaching assistants with advanced knowledge and skills (up to three-fifths of participants) usually belong to the users of various Google applications who employ their skills in online teaching.

Analysis of the frequencies of using Google Applications by the members of The UoB faculty and other academic staff showed that in the case of common computer and Internet skills, most instructors of The UoB (up to ~95%) used various Google Apps. However, just a part, roughly up to three-fifths of the participants used these tools very often or regularly. It looks like the people who are more skillful in using Google Apps, employ them more regularly, and vise versa. These participants created a group of the university instructors who employed their skills in teaching improvement (teaching online classes, for example). Such conclusion does not appear to be surprising because The UoB faculty and other academic staff who belonged to infrequent users of the Google Apps, had fewer chances to employ their skills in academic activities in comparison with the academic instructors who were frequent and advanced users of Google applications.

According to these findings, I conclude that an activity of using the Google Apps and other web and computer tools by the academic instructors at The UoB in their non-teaching and teaching activities may depend on the levels of their skills and knowledge in the field of Google applications ("more skills, more use"). However, we cannot also deny that employing Google applications may also help people to develop their skills ("more use, more skills"). Thus, the

interaction between skills/knowledge and the activity of the use works in both directions. Moreover, having the valid skills and knowledge determines the views and beliefs of The UoB instructors: “more skills, more trust”; the faculty and other academic staff of The UoB who do not employ Google Apps and other Internet applications in teaching online classes have poor skills and knowledge in this field, which may produce incorrect views/beliefs as well as a low trust in application of Google online tools in teaching.

According to this information and conclusion, I would provide straightforward, practical recommendation for the academic instructors:

- Rising advanced skills and knowledge in using Google Apps by academic instructors may help the formation of valid views in these professionals.
- Correct views based on valid knowledge may increase a trust to Google services and tools among members of the university faculty and academic staff, and may provide more confidence and motivation in using the Google applications for improving academic and nonacademic activities in the University.
- A higher activity of the use of Google Apps by the academic instructors may help them to develop advanced skills in the field.
- Development of advanced skills in employing Google Apps by the university instructors may result in increasing the use of Google tools for the improving teaching process.

Question 2: What issues - positive or negative - do The UoB faculty members have regarding the varieties of Cloud computing and, specifically, Google Academic Applications?

According to the study results, most of the participants of the study were familiar with the concept of cloud computing and its services, while just one-fourth of The UoB academic

instructors were unfamiliar with this application or even with this concept. The majority of the faculty and other academic staff of The UoB were familiar with all or some Google academic applications (Google Drive, Google Docs, Google Slides, Google Sheets, Google Forms, Google Scholar, Google Translator, Google+, Google Hangout, Google Classroom, Google Sites and YouTube). It should be pointed out that various Google academic applications had different popularity among the faculty and other academic staff of The UoB. Besides, these applications were used with various frequencies. Obviously, popularity and frequency of using Google academic applications by the members of The UoB faculty and academic staff were positively linked to users' satisfaction in using these Google tools (more satisfaction, more using).

According to the answers provided by the participants, the people had various levels of skills in creating content with using different Google Apps. I found that the participants have more motivation to declare their levels of skills and knowledge for more popular Google tools, and vise versa. It may have a simple interpretation: more popular Google tools are more studied by users; the people are more skillful in those Google applications, and want to declare this. The situation is just opposite in the case of unpopular Google services: less skills, less people have anything to declare. For example, the highest amount of users (more than a half) had advanced, above average or average level skills in employing YouTube, Google Sites, Google Drive and Google Docs; the lowest number of respondents had advanced, above average or average skills in Google Hangout, while the highest portion of the participants (more than one-third) have none or little skills in using this Google App.

Moreover, three-fifths of the users did not provide any reply about their level of skills in Google Hangout; and almost a half of respondents did not answer the question about their level of skills in creating content with using such very academic tools like Google Scholar or Google

Translator; even when they have "Not Applicable" option. Most likely those respondents were from Islamic and Arabic fields who do not need to use foreign articles in their research or translate their academic work to other languages. Another possibility is that the ones who did not use Google Scholar or Google Translator are the new instructors who just started their academic field this year or so and do not yet have a clearly defined research agenda so they do not consider them significant skills.

Less than half of participants were satisfied or very satisfied with Google services provided at The UoB; however, more than a fourth of The UoB academic members expressed neutral opinion about those Google tools, and a fourth of respondents were dissatisfied or very dissatisfied with Google services and its educational applications. In general, more than two-thirds of the participants expressed fair or high satisfaction with the improvement they gained from using Google Apps.

The UoB academic instructors, who actively and frequently employed all or most of these tools for academic and non-academic purposes, generally expressed positive opinion about their experience with Google applications as well as about applicability and usefulness of Google services. Besides, there were participants who wanted to improve their knowledge and skills in using all or some Google tools through getting additional trainings; these people were also positive about using all or some Google services in academic and teaching activities, considering using Google applications as beneficial for academic and nonacademic activities.

Almost all the respondents share documents through Internet soft copies, and most of them do it all the time or most of the time. Most of the respondents had a positive experience with using e-copies: it saves time, allows collaborative work, this tool is easy, safe, free, and accessible anytime/anywhere. While half of the people believed that collaboration via online

sharing is faster than face-to-face meetings and more than one-fifth of respondents thought that online collaboration works just like physical meeting, more than one-fourth of participants provided various reasons why the physical meeting is better than virtual collaboration. Less than one-third of the respondents did not use any Google Apps for sharing scientific thoughts and/ or personal perspectives about related academic topics in current semester. About three-fifths of the academic users in The UoB have never employed any Google Apps to discuss related academic matter with other academics.

Most of the academic instructors of The UoB actively relied on using various Google Apps for communication with their local and international colleagues; however, about three-fifths of the participants never used Google Apps for this purpose. There are faculty and academic staff members who suggested that some Google Tools/Apps could be useless: Google Forms, Google Slides, Google Docs or/and Google Hangout (one-fourth); Google Sheets, Google Drive, or/and Google Classroom (about one-fifth), other Google Apps (less than one-fifth).

The negative or neutral experiences in using Google applications some participants explained by the following reasons: “an absence of an account” (Google Drive); “using as mass storage tool” (Google Drive); “it did not contribute anything into the field by anything yet” (Google Docs, Google Slides, Google Forms, Google Sheets); “compare it to Microsoft office, they are desperate” (Google Docs); “it obviates others” (Google Slides); “it's not beneficial for me“ (Google Hangout, Google Sites, Google Slides, Google Translator); “not so familiar with it”; (Google Sheets, Google Forms, Google Scholar); “it does not seem useful in Art or educational fields right now” (Google Sheets); “it's not clear for me” (Google Forms); “I don't know many things about it” (Google Forms); “it assists the academic field” (Google Scholar,

Google Translator YouTube); “it social” [sic.] (Google Translator, Google Translator, Google+); “I don't even use it at all” (Google+); “it makes the mind not focused” (Google Hangout), “it lacks of essential elements” (Google Hangout); “I don't know how to use it” (Google Classroom); “duplicated, nothing new” (Google Sites). A few people could not explain why they suggested that some Google Apps are not beneficial for them.

Relying on the information above, we can see that the participants who did not like all or some Google academic applications (and expressed negative opinions about them) mostly belonged to 1) deniers of all or some Google services who preferred to use the traditional way instead of Google Apps, and/ or 2) the academic workers who had a lack of knowledge and skills in using Google Apps.

Half of the respondents commented on reasons for their satisfaction or dissatisfaction with the improvement provided by Google tools: “the weakness of the network and not providing adequate training, and free services for members like paid Internet”; “My environment that does not pay much attention to these applications, they use traditional methods that reducing the impact of this modern applications”; “the majority of users are using English daily, it helps me a lot in my major and related subjects”; “the lack of experience, weakness of the network and not providing adequate training, and costly Internet access”; “sometimes the translation is not good”; “most of the time we use Google to search any kind of knowledge, news, pictures etc.; it is very helpful, I use this app to translate and download files of various format related to my course”; “I am fairly satisfied”; “Hopefully we get training on these apps by the university”; “Happy to use Google Apps”.

Many respondents said they referred students to Google Apps to learn from, react to, or discuss relevant content. The academic instructors use these tools because “like to share other

thoughts & pronunciation from other countries and discuss that with learners from time to time"; "I am a good user of these apps"; "apps are easy for the teacher and the students"; "attractive to the learners".

Nevertheless, one-third of The UoB academic instructors did not refer to any Google App for these purposes. Specific reasons why the faculty and other academic staff members did not use Google Apps in the classroom included the university-based and student-based problems ("the curriculum has more than enough references that cover the scientific content"; "my university infrastructure and student knowledge do not support this. Technology needs to be upgraded in the University and students should be trained"; "the lack of students' participation" ; "it's not available for students... so, it's hard to apply and benefit from it"; "no need in using the new tools instead of traditional ones "apps are not felt needed" ; "we use traditional tools like whiteboard and books" ; "who needs them if he has Microsoft office" ; poor internet "the poor of internet availability made these apps unuseful for students" ; "the missing of internet in the classroom" ; "the lack of internet"; lack of skills ("the difficulty to communicate with all" ; "I am not experienced in some of them yet" ; "ignorance"; personal views "not commensurate with my goals nor with the available teaching methods that fit well with our curriculum".

Relying on this information, the negative issues with using Google academic applications by the members of The UoB faculty and academic staff can be resolved accordingly by:

- Providing better Internet connection to both the students and academic employees
- Strategic planning for training and developing faculty members is needed.
- The e-Learning Deanship should articulate the benefits of using such academic services and provide a training program for three or four weeks for those who are interested.

- Offering more technical support and additional training to improve skills of the students and academic instructors in using Google academic Applications.

Question 3: What Are The UoB Instructors' Experiences in Using Google Academic Apps in Higher Education?

The answer to this question has been partially covered in the previous paragraph above. As said, most of The UoB professors, lecturers and teaching assistants employ various Google academic applications in their professional activities in higher education. YouTube was a top-rated Google App in the category of improved efficiency, productivity and other teaching operations in the classroom; about half of the participants of the study said that YouTube very well, well or somehow improves efficiency, productivity and other teaching operations in their classrooms. Google Drive, Google Docs, Google Slides and Google Sites had also high rates by this criterion, while other Google Apps were mid-rated and lower rated; Google Hangout, Google Forms and Google Classroom were the most poorly-rated Google Apps in this category. In case of each Google application, there were from 40% to 50% respondents who did not provide any answer about its improving efficiency, productivity and teaching operations in classrooms of the university.

Two-thirds of the respondents provided additional individual comments on their experiences in using Google academic tools in their university teaching. Majority of positive comments support conclusions made above that most of the members of The UoB faculty and academic staff have positive opinions about using Google Apps in the higher education process: "an unruly desire in applying these applications in the academic teaching rather than traditional tools"; "hope that the university provides faculty members with short training on these very useful applications; this survey was thoughtful and accurate, I learned from it a lot"; "I used

many services"; "I hope to apply what has been mentioned in this study on the students in order to improve the educational process and provide them with the necessary skills and to diversify their cultures and acquiring the necessary values for a better learning skills", etc.

There were valuable critical comments about Google services: "The instrument is so long. There is some redundancy in some questions. Some Apps are usually used in online courses, and are not applicable to face to face classes. Some Saudi Universities do not use their LMS (even when they have them). Sometimes we prefer other apps to use for our tasks and do not use Google Apps (e.g., You now are using Qualtrics while you could have used G forms)". "Overall, you did a great study, which is expected to contribute a lot for Saudi Universities and education in the country"; "we wish to improve Google educational services in the colleges". These and other comments can be carefully evaluated and potentially employed in improving Google academic applications for purposes of higher education.

There were also some neutral comments with empty content ("just because", "nothing to be mentioned", etc.) that were considered as negligible.

Nevertheless, some participants provided a few negative comments too: "not accurate", "Google products are like Chinese products exported to the 3rd world educate students about the importance of blended learning courses and give them some intensify [sic.] training because some of them are so ignorant". By my opinion, the destructive comments with aggressive/defensive content and negative emotional background (like last one) cannot be employed properly and can be neglected. On the other hand, negative but constructive comments about using Google Apps in higher education are valuable feedbacks that provide grounds for improvement of academic tools.

To explain the reason for using Google Apps, the participants mentioned that they had more experience with Google Apps than with other available applications. They pointed out that Google Apps gave them the speed in communicating with other colleagues to get the required information; simplicity, accuracy at work. Furthermore, they have benefitted from these Apps in reducing effort and time; exchanging ideas and applying what is beneficial to the educational process. Google Apps support their goals' purposes, and gathering very solid research around the world in such academic and helpful communities of learning.

Self-education of academic instructors (professors, lecturers, teaching assistants, etc.) is an important part of higher education and its improvement. The positive experiences of the academic population of The UoB with using various Google Apps for purposes of self-education are described by following expressions: "an easier way to reach the knowledge"; "the opportunity to view the databases and new research in the specialty (Google Scholar); "a fast and simple platform (YouTube) to share the opinions of scientists and students about the issues"; "they provide with the needed information and sources"; "Google tools are the very best Apps"; "Google tools are the pretty, easy and faster Apps, showing a huge information in short time"; "they are very helpful to search"; "Apps allow to find a lot of data with different references and formats, while videos are helpful to practice and learn online"; "I used to use these apps"; "these Apps help in preparation of my lectures"; "they contain a considerable amount of information and used by most people"; "they clearly and sufficiently explain unclear points"; "these Apps allow to get every information related to the topic, whether it is new or old"; "the tools provide knowledge fast and when necessary". Surprisingly, there were no negative comments from participants about using Google Apps for self-education.

Making, sharing and using copies are other aspects of higher education. Most of the respondents had a positive experience with using e-copies: “it saves time” ; “allows collaborative work” ; “this tool is easy, safe, free, and accessible anytime/ anywhere”. On the other hand, a small part (one-tenth) of the participants said that “there are no reasons to use it” ; and one-fourth of the academic instructors chose not to respond.

These results probably mean that this small but visible part of the academic instructors do not employ or employ ineffectively Google Apps for their professional academic activities. I suggest that this and other problems can be solved by providing additional educational trainings for the members of The UoB faculty and academic staff precisely:

1) The Dean of e-Learning Deanship needs to provide a short orientation about Google Apps and what they can do for some academic fields as well as for professional development in general.
2) Since the language was a major boundary for a large number of the participants, designing an online course in Arabic Language and disseminating it 24/7 for all members will make substantial progress for those who express interest and can benefit from Google Apps especially when their English Language does not help them that much or do not know how or proceed or do not have time during their work days.
3) Encouraging interested members into small workshops about how to increase teaching productivity would be very helpful in using Google Apps collaboratively and effectively during teaching process.
4) It is better to spread the awareness of modern teaching methods and theories from time to time by using deferent examples each time to motivate members

Limitations of the Study

The study has numerous limitations since many respondents have not provided responses to various questions in the survey. However, there are general limitations of place, time, and people which have to be mentioned for such type of research:

Spatial Limits: The study was conducted in The University of Bisha, which is considered as one of biggest universities in the region. However, it is a medium university compared to other universities in the country.

Temporal Limits: The study was conducted during the Fall semester 2016 because it coincided with the researcher's timeline for completion of the study process.

Human Limits: The study was limited to those who participated in the research instrument even though the responses did not reach the sufficient number to be generalized.

Other limitations are worthwhile to mention:

1) A huge amount of time was wasted to get permission for KKU, six months, to apply the same topic in that university before The UoB became an independent university and separated from KKU.
2) The lack of understanding English Language as well as an Arabic training program were crucial for numbers of participants.
3) Google Apps are fully depended on the Internet connection, and to work very well these Apps need high speed Internet, which was not the case with most of the surveyed.
4) Some comments that were provided by the participants have empty content or duplicated, which made the results confusing and less valid.

5) The distribution process for the survey instrument took six weeks, and because of the local cultural features, the responses obtained from the members of The UoB faculty and other academic personnel were potentially affected by the opinions of the university management.
6) This study interprets the frequency distributions as statistically significant. However, frequency distributions can only be reported.
7) Even when the study instrument was sent by email to all members and posted on the homepage of Blackboard, not all thirteen colleges participated, just four of them. This is an essential indicator about how important it is to engage everyone in the university into improving their environment by participating in survey research when asked.
8) Although the Alpha Coefficient test was not needed in this study, one of the Saudi Electronic University experts required it to verify the survey content.

Recommendations for Future Research:

The recommendations based on results of the study would be potentially beneficial for the improvement of educational processes not only in The UoB but also in other similar universities by solving issues associated with using Google applications by the members of the university faculty and academic staff. These practical suggestions may help to encourage more university's instructors to improve and develop their knowledge and skills in using Google services and employ them in their academic activities in higher education.

- If the study were to be replicated, another quantitative and qualitative data collection tool, for example an interview scale for 20 or 30 members would be recommended. (Ask them why or why not they are interested in training; since the

YouTube is the most frequently used App, do they make their own YouTube videos or just search appropriate and relative content? etc.)

- The researcher should consider the potential influence of the university's management on the opinions of the members of the faculty and academic staff. Such influence can be high enough due to cultural and local features in some regions of the World, and may significantly affect the results of the conducted research. To diminish this effect, the study can be made without the consent/ permission of the university's management in a private environment (outside the university). Shortening the time of the survey is also a good idea to prevent spoiling the results of research.
- The current research demonstrated that The UoB academic instructors are divided into big groups: the people with advanced and good skills in using Google Apps and the professionals who have a lack of knowledge and skills in employing these tools. The future researchers should focus their studies on each group to obtain deeper and more accurate data.
- I would also recommend to make separate investigations of the different groups of faculty and academic staff. The reason is simple: the differences between members of the university faculty and the academic staff (between a full professor and teaching assistant, for example) are usually too high, that putting them in the same sample group makes it very heterogeneous and may result in losing some important findings. It would be a great approach (one of the possible ones) to produce the bigger sample groups, each of them includes the academic instructors of the same rank from similar universities.

- The current study showed that long, extensive questionnaires have a significant problem: some survey participants prefer to skip many important questions. This significantly impacts the results of the study. My perspective is that future research could be significantly improved by developing and employing shorter but still sophisticated questionnaires combined with other surveying methodologies.
- It would be interesting to later study if solutions, proposed by the researchers, help to improve the experience and views of the academic instructors with using Google Apps in the university environment. To do this, investigators should compare the similar groups of academic workers (one group is a control, another one follows to the recommendations) during some significant periods of time (1 month, 3 months and 6 months).
- Google Apps and other free plate forms would be very useful for non-profit organizations and poor private schools. These additional studies can be suggested for both communities to measure their academic achievement before and after applying such powerful services. Also, it can be beneficial to study the Ministry of Education's employees other than academic staff to find out how much can be saved from the training budget by engaging in the Google Suite.

Conclusion

The current study is focused on The UoB academic instructors (professors, lecturers, teaching assistant, etc.) in order to study their behavior, and potential problems and issues they experience during employing Google Apps for improving teaching, organizing, academic collaboration, self-education and other educational purposes.

The study shows that levels of knowledge and specific skills may significantly affect the ability of the members of the faculty and academic staff to apply the benefits of using Google services/ tools in their professional activities. Lack of experience, tool awareness and effectiveness in using Google services may result in a lack of confidence and trust to Google products, disappointment, and the formation of biased negative opinion about the usefulness of these applications for academic users within the university environment.

Fortunately, current research sheds the light on the problem and provides simple, straightforward recommendations that may help to effectively solve the temporary issues of the faculty and academic staff with employing Google tools. I hope that my work makes a significant difference in the field, and helps in building better academic and learning communities.

Appendix A: IRB INTERNATIONAL RESEARCH

Appendix A: International Research

Export Control review is required for all international research. Submit the following documents to the Export Control Office at exportcontrol@wayne.edu:

- Completed Protocol Summary Form
- Appendix A (International Research)
- Supporting Documents:
  - Letter(s) of Support (if applicable)
  - Names of contact persons, groups, etc.
  - Any additional information deemed appropriate

NOTE: For research conducted by **VA investigators**, an approval letter from the Medical Center Director is required.

NOTE: For research sponsored by the **Department of Defense (DoD)**, see IRB Policies "International Research" and "Department of Defense Requirements for Human Subject Research Protection."

1.	Country where international research-related activities will be conducted: NOTE: If international research-related activities will be conducted in more than one country, **complete a separate Appendix A for each country**.	The Kingdom of Saudi Arabia, Aseer Regian, Abha City.

	a. Has the Export Control Office reviewed the proposed international research?	☐ Yes **– provide documentation (e-mail) from the Export Control Office** ☒ No **– contact the Export Control Office for assistance**
2.	List the specific site(s) in the country listed in Q#1 where research will be conducted (i.e. institution, organization, or community):	King Khalid University Facullty members
3.	Is there a local IRB, research review board, government official/board, or equivalent available to review the ethics of the proposed research for the international site(s)?	☒ Yes (include local approval letters) **– go directly to Q#4** ☐ No
	a. Is a local expert or community leader available to review the proposed research and provide documentation of approval? NOTE: The individual(s) providing approval must be familiar with the cultural background, local context, and community attitudes of the country in which the research will be conducted and should not be associated with the conduct of the proposed research.	☐ Yes (include documentation of approval) **– go directly to Q#4** ☐ No
	b. Will only social, behavioral, or educational research methods be used?	☐ Yes **– provide documentation of the following: (1) the lack of local review and (2) plans for observing local ethical standards** ☐ No **– STOP, you must obtain approval from a local IRB, research review board, government official/board, local expert, community leader, or equivalent**

4.	Describe qualifications from relevant coursework, past experience, or training to justify international research capabilities:	I have a Bachelor degree in K-12 and Master degree in Instructional Technology and my emphasize area was on staff members performance in online courses, which is very relevant to this subject. In addition, I have been studying in PhD program, Instructional Design & Technology from about 3 years. All these years gave me a wide experience and a better picture of this subject, made me kinde of capablie to do it.
5.	Concisely describe the research setting of the host country. Include social/cultural norms, social/cultural sensitivities, and/or political conditions of the location(s) in which this research will be conducted. Also include any provisions that will be made to conduct the research in this context (for example, monetary compensation for participation in a research study may need to be adjusted according to income standards of the host country to avoid offering a sum of money that might be coercive.):	I have communicated with the university administration to take such approval to conduct the study and am still waiting for the official approval. The instrument has been translated to the most common language there, which is the Arabic language, and subtitle display on specialists from the Department of Educational Technology Faculty of Education at the university and was reviewed and approved for the application and does not contain any ambiguous or sensitive phrases that may affect the validity of the data of the participants. Participation in this study is completely free and there is no material return or incentive prizes for participants.
6.	Does the PI speak/read/write the language of the potential participants?	☒ Yes – go directly to Q#7 ☐ No
	a. Explain provisions for recruitment and consent translation(s):	
7.	Has the PI been invited into the community?	☒ No ☐ Yes

	a. How did the PI identify the community that will be studied?	The PI is one of this community and knows since 2007.	
	b. How will the researchers enter the community and become familiarized with the population?	The survey will be electronically conducted using Qualtcis on Wayne State University server	
8.	Anticipated Dates of Travel:	Departure : No need	Return: No need

Appendix B: IRB USING INTERNET

Appendix B: Internet Use in Research

1. Select all internet recruitment methods that will be used. The submission should include copies of advertisements, posting language, or e-mails that will be used for internet recruitment.

   See IRB policy on advertising:
   http://irb.wayne.edu/policies/74_advertising_for_research_participants.pdf

   ***WSU Pipeline Snippets**: Snippet is the appropriate place to post recruitment announcements on WSU Pipeline. Most Depts/Divisions have designated snippet managers. Snippet requirements are 256 characters for the title (includes spaces and punctuation), 512 characters for the summary and a link and image can be included. IRB approval to recruit students &/or employees is also needed to advertise on Pipeline.

   ☐ None **– go directly to Q#2**
   ☐ Wayne State Pipeline Snippets*
   ☐ Wayne State Psychology Pool
   ☐ E-mail
   ☐ Listserv
   ☐ Personal Website
   ☐ Social Media/Networking Website
   ☐ Organization Website
   ☒ Internet Survey/Research Website
   ☐ Other: _____

   a. Will a private or restricted website be used for recruitment (i.e. personal website, organization website, message board, closed social media group, etc.)?

   ☒ No
   ☐ Yes (List website names): _____

   NOTE: Support letters/e-mails are required to recruit using a private website, restricted website, closed social networking group, or non-WSU academic internet participant pool.

   b. Will a publicly available website or social media be used for recruitment?

   ☒ No
   ☐ Yes (List website names): _____

   NOTE: If you are using a *publicly available* website or social media for *recruiting only*: (1) gain IRB approval via Appendix B, (2) gain permission from the site administrators and (3) post to sites only where you have gained permission to advertise.

c. If e-mail will be used for recruitment, how will potential participants' e-mail addresses be obtained and stored?

☒ N/A – E-mails will not be used for recruitment

d. If e-mail or a listserv will be used, how will e-mails be sent?

NOTE: Include the e-mail template with the protocol submission. Include the "Subject" line that will be used for the e-mail.

☐ N/A – E-mail or a listserv will not be used for recruitment

2. Does this study make use of an internet survey service (e.g., Zoomerang, Survey Monkey, etc.)?

☐ No **– go directly to Q#3**
☒ Yes

a. What is the name of the internet survey service?

3. Will private internet posts, messages, broadcasts (e.g. webcam, chat), social media, or other private internet content be collected for research purposes?

☒ No **– go directly to Q#4**
☐ Yes

a. Describe what content or information will be collected?

b. How will informed consent for internet activities be obtained? (Select all that apply.)

☐ Electronic Information Sheet with "check box" for consent
☐ E-mail with name
☐ In-person written informed consent
☐ In-person oral consent or information sheet
☐ Waiver of informed consent will be requested
☐ Other (specify): _____

c. How will individuals' identities be protected?

4. Will investigators have interactive discussions with participants using the internet (e.g. webcam, chat, message boards, internet posts, social media, e-mail)?

☒ No **– go directly to Q#5**
☐ Yes

a. How will investigators identify themselves as researchers?

5. What type of data will be collected? (Select all that apply.)

- ☒ Surveys/questions
- ☒ Email correspondence
- ☐ Personal messages
- ☐ Chat room observation
- ☒ Website postings
- ☐ WSU Blackboard/Pipeline
- ☒ Other: _____

☐ N/A – Only using the internet for recruitment

6. How will internet data (i.e. lists of e-mails, messages, surveys, etc.) be stored? (Select all that apply.)

- ☒ On a secure server
- ☐ PI's personal computer
- ☒ Encrypted website
- ☒ Other _____

☐ N/A – No data from the internet will be stored

a. Who will have access to the data?

b. Describe the confidentiality plan for the data:

Appendix C: IRB AMENDMENT OF CHANGES

WAYNE STATE UNIVERSITY

IRB Administration Office
87 East Canfield, Second Floor
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7122
http://irb.wayne.edu

NOTICE OF EXPEDITED AMENDMENT APPROVAL

To: Bandar Alshihri
College of Education

FOR:
From: Dr. Deborah Ellis or designee C. Zolonack, PhD/RM
Chairperson, Behavioral Institutional Review Board (B3)

Date: February 26, 2016

RE: IRB #: 095915B3X

Protocol Title: Using Google Applications as Part of Cloud Computing to Improve Knowledge and Teaching Skills of Faculty Members at University of Bisha, Bisha, Saudi Arabia

Funding Source:

Protocol #: 1509014357

Expiration Date:

The above-referenced protocol amendment, as itemized below, was reviewed by the Chairperson/designee of the Wayne State University Institutional Review Board (B3) and is APPROVED effective immediately.

- Protocol - Project Title modifed to reflect a change in the name of the university referenced in the project title. The University of Bisha was recognized in April, 2014 as an independent university based on the higher education council's resolution Number 72.Khalid University does not exist in the region anymore. Receipt of letter from Kingdom of Saudi Arabia Ministry of Education University of Bisha indicating approval of request of study.

Appendix D: THE REQUEST OF APPLYING THE STUDY IN THE UOB:

الموضوع: طلب تطبيق دراسة علمية

التاريخ: ١٦ رجب ١٤٣٧هـ

سعادة وكيل الجامعة للدراسات العليا والبحث العلمي بجامعة بيشة الموقر

السلام عليكم ورحمة الله وبركاته، تحية طيبة . . . وبعد

أرفع لسعادتكم بطلبي هذا وفيه أفيدكم برغبتي في تطبيق دراسة الدكتوراه على أعضاء هيئة التدريس بجامعة بيشة حول استخدامات تطبيقات قوقل التعليمية Google Apps، وأرغب في الحصول على خطاب رسمي يفيد بموافقة الجامعة على إجراء هذه الدراسة كي يتسنى لي استكمال الإجراءات الرسمية لمثل هذه الدراسات.

ونظراً لما ستعود به هذه الدراسة العلمية من أثرٍ منشودٍ على تطوير العملية التعليمية بشكل عام وأداء أعضاء هيئة التدريس والطلاب بشكل خاص، ولما لمسناه من حرص سعادتكم على دعم البحث العلمي وما من شأنه الارتقاء بالعملية التربوية، لذا آمل تلطف سعادتكم بالموافقة على طلبي هذا وتوجيه من ترون بالرد عليه **بصيغة صريحة** - باللغة الإنجليزية إن تيسر - ليتم تقديمه لعمادة الدراسات العليا هنا بجامعة الإبتعاث.

وتفضلوا بقبول وافر الشكر والتقدير سلفاً على حسن تعاونكم

أخوكم/ بندر بن عبدالله الشهري
مبتعث - الولايات المتحدة الأمريكية
Wayne State University Detroit, Michigan, USA

Appendix E: THE AGREEMENT OF APPLYING THE STUDY IN THE UOB:

Kingdom of Saudi Arabia
Ministry of Education
University of Bisha

المملكة العربية السعودية
وزارة التعليم
جامعة بيشة

Dear Mr. Bandar Alshihri,
Greeting,

We have received your request about applying your doctoral study that titled as "Using Google Application as a Part of Cloud Computing to Improve Knowledge and Teaching Skills of Faculty Members at Bisha University, Saudi Arabia", and we would like to inform you that we are welcoming your requestو and we have no concerned or any consideration about this study in this point.

Thank you and wish you the best in your degree

المكرم: بندر بن عبدالله الشهري
تحية طيبة . . . وبعد:

تلقينا طلبكم بشأن تطبيق دراسة الدكتوراه المعنونة بـ" استخدام تطبيقات قوقل كجزء من خدمات الحوسبة السحابية لتطوير أداء أعضاء هيئة التدريس المعرفي والمهاري بجامعة بيشة، المملكة العربية السعودية"، ونود احاطتكم بأننا نرحب بطلبكم ولا يوجد لدينا أي تحفظ أو قيود عليها حتى هذه اللحظة.

مع دعواتنا لكم بالتوفيق في هذه المرحلة الدراسية

وكيل الجامعة للدراسات العليا والبحث العلمي
The Vice-President of The Deanship of Graduate and Scholarly Research

د. مهدي بن علي القرني

وزارة التعليم Ministry of Education University Of Bisha جامعة بيشة

المرفقات / التاريخ / الرقم /

Appendix F: THE INSTRUMENT TOOL (English)

Salaam,
Ladies and Gentlemen,
Intro.

This survey is conducted and designed at Wayne State University, Detroit, Michigan, USA. to investigate and scrutinize the actual uses and experiences of Google applications (Apps) at University of Bisha (UoB) in Saudi Arabia during the Fall semester of 2016. You are being selected to participate in this study because of your current position as an instructor in this university. If you agree to take part in this research study, then you will be questioned *about some demographic information as well as your academic usage of specific Google Apps such as Google Drive, Google+, YouTube ...etc*

As a researcher, I would like to ensure you that all your answers will be 100% confidentially, and will be used for the research purposes only. Also, your participating is entirely voluntary, which means there is NO financial compensation for your participation and you may retreat at any time. However, your contribution will help in better integration and implementation of utilizing Google Apps into teaching methods and the learning activities in higher education, in general, and in Kingdom of Saudi Arabia, in particularly. *It requires about 30 minutes to complete the survey which has five sections.* ***The survey must be completed in one sitting****; it cannot be saved and returned to it later.*

Participation:
By completing this survey you are agreeing to participate in the study topic. Participation in this research is for university instructors at University of Bisha; if you are not a UoB's instructor please do NOT answer this survey.

Questions: If you have any question about this study now or in the future, you may contact **Bandar Abdullah Alshihri** at:
Cell-phone number: (+1) 313-231 8800
Twitter: @Bandar_Alabdaly
Google+: Bandar Alabdaly
Email: Bandar.alshihri@wayne.edu

If you have questions or concerns about your rights as a research participant, the Chair of the Institutional Review Board (IRB) can be contacted at (313) 577-1628, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

(Part 1) General Information (Demographic Factors): [7 questions]
This part includes very basic information about you as a participant. Please answer all seven questions

1) Select The Preferred Language:
- العربية
- English

2) Select Your Gender:
- Male
- Female

3) Select Your Age Group From The Following List:
- Under 25 years old
- Between 25 - 34 years
- Between 35 - 44 years
- Between 45 - 54 years
- From 55 or older

4) Select Your Nationality:
Saudi Arabia is selected as a default choice; please change it if needed
- Saudi
- Arabic (Gulf citizen)
- Arabic (African)
- Arabic (Yemen + Alsham and Iraq)
- Asian
- European
- American
- Other (please indicate here ……)

5) Indicate: your Academic Major:…….
your College:……
your Department:…….

6) Do you teach any courses this semester whether in class (face-to-face) or on-line?
- Yes
- No

7)- What is your current academic level?
- An Instructor
- A Teaching Assistant
- A Lecturer
- An Assistant Professor
- An Associate Professor
- A full Professor
- Other

(Part 2) Online Teaching Experience: **[11 questions]**
This section is emphasizing daily activities with Computer devices, Internet communication, and social media blogs. Please answer each questions as accurately as possible.

8) How many years of using Computer experience do you have?
- Less than 5 years
- From 5 - 10 years
- More than 10 years

9) How long you have been using Internet "in general"?
- Less than 5 years
- Between 6-10 years
- Between 11-15 years
- More than 15 years

10) How would you rate your satisfaction with online communication
Such as: e-mail tools, video conferences, chatting messengers, and so on?.
- Very Satisfied
- Fairly Satisfied
- Neither Satisfied nor Dissatisfied
- Somewhat Dissatisfied
- Very Dissatisfied

11) How many **On-line courses** have you taught in the past so far at UoB whether using BlackBoard, WebCT, Moodle or any other Online teaching method?
- None
- Only ONE course
- TWO - THREE courses
- FOUR - FIVE courses
- SIX or more courses

12) How many **On-line courses** do you teach this semester at UoB whether using BlackBoard, WebCT, Moodle or any other Online teaching method?
- None
- Only ONE course
- TWO - THREE courses
- FOUR - FIVE courses
- SIX or more courses

13) Do you consider yourself an active user of social media websites and their applications?
Ex. Facebook, Twitter, Linkedin, Google+, and Instagram etc.
- Yes, extremely active
- Quite active

- Moderately active
- Slightly active
- No, not active at all

14) How familiar are you with the concept of cloud computing?

- Extremely familiar
- Very familiar
- Somewhat familiar
- Not that much familiar
- I have no idea about it

15) Do you share documents through Internet as electronic copies (soft copy), or do you prefer sharing printed versions (hard copy) instead?

- Yes, I share e-copies all the time
- I do share e-copies most of the time
- I share only the urgent documents via Internet only
- I barely share e-documents
- No, I do not share soft copy, and I prefer a printed version all the time

16) Explain in 2-3 sentences the reasons of why you share soft copies, or why you don't do so?

……
……
……

17) Do you like to meet physically with your friends or colleagues to work collaboratively on a project or any task you have, or you believe that it can be done through Internet from anywhere using whatever available tools, and there is no need to meet individually?

- I think, it is just wasting time and I believe on physical meeting to get things done
- Collaborative online works with a small group only
- Collaborative online can be useful with a large group only
- Collaborative can happen anywhere and there is no deference. It works for me just like physical meeting
- Yes, I believe it can be done through collaborative online faster than face-to-face meeting

18) In 2-3 sentences, explain the reasons of why or why not you hold your beliefs?

……
……
……

(Part 3) Experience in Using Google Academic Tools/ Applications (Apps). (9 questions)

This section has several elements and intended to collect information about the usage of the following Apps: Google Drive, Google Docs, Google Slides, Google Sheets, Google Forms, Google Scholar, Google+, Google Hangout, Google Classroom, Google sites, Google Translator and YouTube as part of Google services.

19) In general, indicate how often do you use these Apps?

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							
Google+							
Google Hangout							
Google Classroom							
Google Sites							
YouTube							

20) Do you have a personal channel, page, or an account for the following Apps:

Apps	Yes, I have	No, I have not	I do not know	Not applicable
Google Drive				
Google Docs				
Google Slides				
Google Sheets				
Google Forms				
Google Scholar				
Google Translator				

Apps	Yes, I have	No, I have not	I do not know	Not applicable
Google+				
Google Hangout				
Google Classroom				
Google Sites				
YouTube				

21) Which of these Apps would you like to learn about and Why?
You can choose as many as you like by marking them with (*)

Apps	Enter (*) here	Write your reason (Why) here!
Google Drive		
Google Docs		
Google Slides		
Google Sheets		
Google Forms		
Google Scholar		
Google Translator		
Google+		
Google Hangout		
Google Classroom		
Google Sites		
YouTube		

22) Have you had any formal training, provided by your university, on how to use Google Apps in your academic career or in your teaching?

Apps	Yes, I have trained	No, but I like to learn about	I do not remember	I'm not interested	Not applicable
Google Drive					
Google Docs					

Apps	Yes, I have trained	No, but I like to learn about	I do not remember	I'm not interested	Not applicable
Google Slides					
Google Sheets					
Google Forms					
Google Scholar					
Google Translator					
Google+					
Google Hangout					
Google Classroom					
Google Sites					
YouTube					

Please choose all applicable choices

23) Which Tools / Apps from the following list have you used **in the past** to improve your *knowledge in your discipline*?

You can choose more than one

• Google Drive	• Google+
• Google Docs	• Google Hangout
• Google Slides	• Google Classroom
• Google Sheets	• Google Sites
• Google Forms	• Google Translator
• Google Scholar	• YouTube

24) Which Tools / Apps from the following list do you use **currently** to improve your *knowledge in your discipline*?

You can choose more than one

• Google Drive	• Google+
• Google Docs	• Google Hangout
• Google Slides	• Google Classroom
• Google Sheets	• Google Sites

• Google Forms	• Google Translator
• Google Scholar	• YouTube

25) Which Tools / Apps from the following list have you **used in the past** to improve your *Teaching Skills*?
You can choose more than one

• Google Drive	• Google+
• Google Docs	• Google Hangout
• Google Slides	• Google Classroom
• Google Sheets	• Google Sites
• Google Forms	• Google Translator
• Google Scholar	• YouTube

26) Which Tools / Apps from the following list do you use **currently** to improve your *Teaching Skills*?
You can choose more than one

• Google Drive	• Google+
• Google Docs	• Google Hangout
• Google Slides	• Google Classroom
• Google Sheets	• Google Sites
• Google Forms	• Google Translator
• Google Scholar	• YouTube

27) Overall, how satisfied are you with Google services/Apps at UoB, and Why?

	Write a short answer (3-4 sentences) Why:
Very satisfied	
Satisfied	
Neutral/Not sure	
Dissatisfied	
Very dissatisfied	

(Part 4) Using Google Apps to Improve Knowledge in your Teaching Discipline: [10 question]

This part is designed to collect data about using Google Apps in order to improve and update knowledge in your teaching discipline.

28) When you have a new subject you would like to get more information about, which of the following Google Apps do you use to educate yourself?
Please choose all applicable choices.

Apps	Always	Most of the time	Sometimes	Often	Seldom	Never
Google Drive						
Google Docs						
Google Slides						
Google Sheets						
Google Forms						
Google Scholar						
Google Translator						
Google+						
Google Hangout						
Google Classroom						
Google Sites						
YouTube						

29) Please indicate the reasons why you choose these Apps to educate yourself?

……

……

30) Have you **used** any of the following Google Apps to share scientific thoughts or personal perspectives about related academic topics with colleagues locally or internationally?

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							
Google+							
Google Hangout							
Google Classroom							
Google Sites							
YouTube							

31) Do you, **currently**, use any of the following Google Apps to **share** scientific thoughts or personal perspectives about related academic topics with colleagues locally or internationally?

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google+							
Google Hangout							
Google Classroom							
Google Sites							
YouTube							

32) Have you used any of the following Google Apps to discuss related academic topics with other colleagues locally or internationally?

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							
Google+							
Google Hangout							
Google Classroom							
Google Sites							
YouTube							

33) Do you use, currently, any of the following Google Apps to discuss related academic topics with other colleagues locally or internationally?

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							
Google+							
Google Hangout							
Google Classroom							
Google Sites							
YouTube							

34) Indicate the reasons why you choose or have chosen these Apps to discuss related academic topics?

……
……

35) Do you interact with colleagues locally or internationally who ask for feedback in their academic subject by using any of the following Google Apps?

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							
Google+							
Google Hangout							

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Classroom							
Google Sites							
YouTube							

36) From the following list of Google Tools/ Apps, which one is not beneficial from your perspective, and why?
You can choose more than one

Apps	Enter (*) here	Write your reason (Why) here!
Google Drive		
Google Docs		
Google Slides		
Google Sheets		
Google Forms		
Google Scholar		
Google Translator		
Google+		
Google Hangout		
Google Classroom		
Google Sites		
YouTube		

37) Overall, how satisfied are you with the improvement you gain from Google Apps?

Very Satisfied	Fairly Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied

Please comment:
……
……
……
……

(Part 5) Using Google Apps in Improving Teaching Skills: [6 questions]
This part is designed to collect data about using Google Apps to improve teaching skills in your discipline.

38) Have you used any of the following Google Apps in your classroom to share, interact, or discuss relevant content to your course's topics?
if ***Yes*** please select them. If ***No,*** then go to the next question

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							
Google+							
Google Hangout							
Google Classroom							
Google Sites							
YouTube							

39) Indicate the reasons of Why you do not use these Apps in your classroom?
……
……

40) Have you referred your students to any of the following Google Apps to learn from, react to, or discuss relevant content?

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							
Google+							
Google Hangout							
Google Classroom							
Google Sites							
YouTube							

41) How often do you integrate the following Google Apps in your students' testing and assessment procedures?

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Drive							
Google Docs							
Google Slides							
Google Sheets							
Google Forms							
Google Scholar							
Google Translator							
Google+							

Apps	Never	Less than Once a Month	Once a Month	2-3 Times a Month	Once a Week	2-3 Times a Week	Daily
Google Hangout							
Google Classroom							
Google Sites							
YouTube							

42) Indicate your level of skills in creating content in the following Google Apps:

Apps	Expert	Above average	Average	Beginner	Unable
Google Drive					
Google Docs					
Google Slides					
Google Sheets					
Google Forms					
Google Scholar					
Google Translator					
Google+					
Google Hangout					
Google Classroom					
Google Sites					
YouTube					

43) How have Google Apps improved efficiency, productivity, and other teaching operations in your classroom?

Apps	Very Well	Good	Somehow	not that much	Nothing notable
Google Drive					
Google Docs					
Google Slides					

Apps	Very Well	Good	Somehow	not that much	Nothing notable
Google Sheets					
Google Forms					
Google Scholar					
Google Translator					
Google+					
Google Hangout					
Google Classroom					
Google Sites					
YouTube					

44) Please add other comments that you wish to share that were not addressed in this instrument:

……
……
……
……

……
……
……
……

……
……
……
……

Thank you so much for being part of this study and for your valuable time and participation.

Appendix G: THE INSTRUMENT TOOL (Arabic)

العربية

Default Question Block

استبيان يتعلق باستخدام أعضاء هيئة التدريس لتطبيقات Google التعليمية كجزء من الخدمات السحابية لتطوير المعرفة الأكاديمية ومهارات التدريس بجامعة بيشة، المملكة العربية السعودية.

السيدات والسادة أعضاء هيئة التدريس بالجامعة..... سلمكم الله
السلام عليكم ورحمة الله وبركاته، تحية طيبة . . . وبعد

مقدمة:
هذا الاستبيان تم بناءه وصياغته بجامعة وين ستيت (Wayne State University)، ديترويت، ولاية متشقان، الولايات المتحدة الأمريكية، لاستقصاء ودراسة الاستخدامات الفعلية وخبرة التعامل مع تطبيقات Google لدى أعضاء هيئة التدريس بجامعة بيشة في المملكة العربية السعودية خلال فصل الخريف لعام ٢٠١٦ م. وقد تم اختيارك للمشاركة في هذه الدراسة بسبب وظيفتك الحالية كعضو/ عضوة هيئة التدريس بالجامعة. إذا وافقت على المشاركة في هذه الدراسة البحثية، فسوف يتم الطلب منك الإجابة على بعض المعلومات الاحصائية بالإضافة الى معلومات عن استخدامك الأكاديمي لبعض تطبيقات Google الأكاديمية مثل Google درايف، Google+ بلس ، يوتيوب.....الخ.

وكباحث أود التأكيد لشخصكم الكريم أن جميع المعلومات المقدمة منكم ستكون في غاية السرية، وستستخدم لأغراض الدراسة البحثية فقط. بالإضافة إلى أن مشاركتكم ستكون طوعية بالكامل، مما يعني أنه لن يكون هناك أي تعويض مالي لمشاركتكم و بإمكانكم الانسحاب من هذه الدراسة في أي وقت تريدون، غير أن مساهمتكم ستساعد في تطوير استخدام تطبيقات Google في طرق التدريس والأنشطة التعليمية في مجال التعليم العالي عالمياً بشكل عام، ومحلياً - بالمملكة العربية السعودية - على وجه الخصوص. تتكون هذه الاستمارة من خمسة محاورٍ وقد تستغرق منك قرابة (٢٠ دقيقة) لإكمالها. كما أود أن أنوه إلى أنه يجب اكمال هذا الاستبيان في جلسة واحدة، فلا يمكنك حفظها والعودة اليها في وقت آخر.

المشاركة:
بإكمالك هذا الاستبيان فإنك توافق على المشاركة في موضوع الدراسة. المشاركة في هذا البحث مقصورة على أعضاء هيئة التدريس بجامعة بيشة، فإذا لم تكن عضواً بالجامعة خلال فترة تطبيق الدراسة، فأرجو منك عدم

المشاركة في هذا الاستبيان.

_____ _____ _____ _____

الأسئلة: إذا كان لديك أي سؤال عن هذه الدراسة، حالياً أو مستقبلا، فبإمكانك التواصل مع
بندر عبدالله الشهري :
رقم الجوال: ٠٠ ٣١٣٢٣١٨٨ (+١)
تويتر: Bandar_Alabdaly@
قوقل+ بلس: Bandar Alabdaly
البريد الألكتروني: Bandar.alshihri@wayne.edu

وإذا كان لديك سؤال أو تحفظات عن حقوقك كمشارك في البحث، فبإمكانك الاتصال برئيس هيئة المراجعة المؤسسية للمشاريع البحثية بجامعة وين ستيت على هاتف:١٦٢٨-٥٧٧ (٣١٣)+١ ، كما بإمكانك الاتصال ايضا على هاتف ١٦٢٨-٥٧٧ (٣١٣)+١ للاستفسار أو الإدلاء بأي مخاوف او شكوى تواجهها.

هل توافق على المشاركة في هذه الدراسة؟

نعم
لا

(القسم الأول) معلومات عامة (إحصائية): [٧ أسئلة]
برجاء الإجابة على جميع الأسئلة

---

١) برجاء تحديد اللغة المفضلة:

العربية
English

---

٢) فضلاً حدد الجنس:

ذكر

أنثى

---

٣) فضلاً، قم بتحديد الفئة العمرية من المجموعات التالي:

---

٤) فضلاً، قم بتحديد جنسيتك:
(سعودي) تم وضعها كخيار افتراضي، برجاء تغييره إن لزم الأمر

في حال كان الاختيار (غير ذلك) يرجى تحديد جنسيتك

الدولة

---

٥) فضلاً حدد:

التخصص الأكاديمي
الكلية
القسم

---

٦) هل تُدَرس/ تدرسين أي مقررات هذا الفصل، سواءً كانت داخل القاعة الدراسية أو عن طريق الإنترنت؟

نعم

لا

٧)- ماهي درجتك العلمية؟

(القسم الثاني) خبرة التدريس الإلكتروني: [١١ سؤال]
هذا القسم يركز على الاستخدامات اليومية لأجهزة الحاسب الآلي وماشابهها، الاتصال بالإنترنت، ومواقع التواصل الاجتماعي. برجاء الاجابة على جميع الأسئلة بدقة ما أمكن.

٨)- كم عدد سنوات الخبرة في استخدام الحاسب الآلي؟

أقل من ٥ سنوات

من ٥ إلى ١٠ سنوات

أكثر من ١٠ سنوات

٩)- كم مضى لك في استخدام الإنترنت بشكل عام؟

أقل من ٥ سنوات

بين ٦-١٠ سنوات

بين ١١ - ١٥ سنة

أكثر من ١٥ سنة

١٠)- كيف تقيم رضاك عن التواصل عبر الإنترنت؟
على سبيل المثال: أدوات البريد الإلكتروني، ومؤتمرات الفيديو، وبرامج المحادثات الكتابية وغيرها

راضي تماماً راض إلى حد ما معتدل: لا راضي ولا غير غير راضين إلى حد ما مستاء جدا

راضين

١١) كم عدد المقررات الدراسية التي قمت بتدريسها في الماضي في جامعة الملك بيشة؟
سواء عن طريق البلاك بورد، WebCT، المودل أو أي طريقة تدريس أخرى من خلال الانترنت

١٢)- كم عدد المقررات الدراسية التي تقوم بتدريسها هذا الفصل الدراسي في جامعة بيشة؟
سواء عن طريق استخدام البلاك بورد، WebCT، المودل أو أي طريقة تدريس أخرى عن طريق الانترنت

13) هل تعتبر نفسك مستخدم نشط من مواقع التواصل الاجتماعي وتطبيقاتها؟
على سبيل المثال: الفيسبوك، تويتر، لينكدين + Google، وتليقرام ...الخ

نعم، ونشط للغاية

نشط جدا

مشارك بشكل معتدل

قليل المشاركة

لا، لست مستخدماً نشاطاً على الإطلاق

١٤)- هل مفهوم الحوسبة السحابية مألوف/ معروف لديك؟

مألوف للغاية

مألوف

مألوف إلى حد ما

ليس مألوف كثيراً

ليس لدي أي فكرة عن ذلك

١٥) هل تشارك المستندات العلمية والوثائق عبر الإنترنت كنسخ الالكترونية، أو تفضل تبادل الإصدارات المطبوعة (نسخة ورقية) بدلاً من ذلك؟

نعم، أشارك النسخ الإلكترونية في كل وقت

أشارك النسخ الإلكترونية أغلب الوقت

أشارك الوثائق العاجلة عبر الإنترنت فقط

أنا بالكاد أشارك نسخ إلكترونية عبر الإنترنت

لا. لا أشارك أي نسخ إلكترونية، وأفضل النسخ المطبوعة في كل وقت

١٦) اشرح في جملتين أو ثلاث الأسباب التي تجعلك حريص على مشاركة المستندات عبر الإنترنت، أو لماذا لا تشاركها؟

١٧)- هل تفضل الاجتماع بأصدقاءك / الزملاء بالقسم أو الكلية شخصياً للعمل المشترك معاً في مشروع ما، أو ترى أنه يمكن أن يتم هذا الاجتماع عن طريق الإنترنت من أي مكان باستخدام الأدوات المتاحة في وقتنا الحاضر، وليس هناك حاجة للقاء الشخصي؟

باعتقادي، اجتماعات الإنترنت مجرد إضاعة للوقت، وأنا مؤمن تماماً في ضرورة الاجتماع الشخصي لإنجاز المهام المطلوبة

أرى أن العمل المشترك/ التعاوني من خلال الإنترنت يكون أنفع في الاجتماعات الصغيرة فقط

أرى أن العمل المشترك/ التعاوني من خلال الإنترنت يكون أنفع في الاجتماعات الكبيرة فقط

العمل المشترك/التعاوني يمكن أن يتم من أي مكان وليس هناك أي فرق لدي بينه وبين الحضور الشخصي

نعم، أعتقد أنه يمكن أن يتم انجاز تلك المهام باستخدام الأدوات المتاحة عبر الإنترنت أسرع من تأجيلها لحين الإجتماع الشخصي.

١٨) في جملتين أو ثلاث، فضلاً أذكر الأسباب التي جعلتك تعتقد/ تؤمن بهذا الرأي؟

(القسم ٣) الخبرة في استخدام أدوات قوقل Google الأكاديمية: (٩ أسئلة)

يحتوي هذا القسم على عديد من العناصر تهدف إلى جمع معلومات حول استخدامك للتطبيقات التالية:
الخدمات السحابية لقوقل Drive، تطبيق المستندات Docs،
تطبيق الشرائح Slides، تطبيق الصفحات Sheets، النماذج Forums، الباحث العلمي Google Scholar،
موقع التواصل الاجتماعي Google+ ، مؤتمرات الفيديو Hangout، الفصول الدراسية الافتراضية
Classroom، تطبيق المواقع Sites ، تطبيق المترجم Translator، وتطبيق اليوتيوب YouTube كجزء من
خدمات قوقل Google.

١٩) بشكل عام، أشر/ حدد كيف تستخدم هذه التطبيقات غالباً ؟

	أبداً	أقل من مرة في الشهر	مرة في الشهر	٢-٣ مرات في الشهر	مرة كل أسبوع	٢-٣ مرتين في الأسبوع	يومياً
الخدمات السحابية Google Drive	○	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○	○

تطبيق الصفحات Sheets	○	○	○	○	○	○	○
تطبيق النماذج Fourms	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○
موقع التواصل الاجتماعي Google+	○	○	○	○	○	○	○
مؤتمرات الفيديو Hangout	○	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○

٢٠) هل تملك حساب، صفحة أو قناة في أحد التطبيقات التالي:

	نعم، أملك	لا، ليس لدي	غير متاح/غير ممكن
الخدمات السحابية Google Drive	○	○	○
تطبيق المستندات Docs	○	○	○
تطبيق الشرائح Slides	○	○	○
تطبيق الصفحات Sheets	○	○	○
تطبيق النماذج Fourms	○	○	○
الباحث العلمي Scholar	○	○	○
المترجم Translator	○	○	○

شبكة التواصل الاجتماعي Google+	○	○	○
مؤتمرات الفيديو Hangout	○	○	○
الفصول الدراسية Classroom	○	○	○
تطبيق المواقع Sites	○	○	○
اليوتيوب YouTube	○	○	○

٢١) أي من هذه التطبيقات ترغب أن تزيد معرفتك عنه ولماذا؟
يمكنك اختيار أكثر من تطبيق عن طريق وضع علامة (*) أمامها

	ضع علامة (*) هنا	ضع السبب - إن وجود- هنا
الخدمات السحابية Google Drive		
تطبيق المستندات Docs		
تطبيق الشرائح Slides		
تطبيق الصفحات Sheets		
تطبيق النماذج Fourms		
الباحث العلمي Scholar		
المترجم Translator		
شبكة التواصل الاجتماعي Google+		
مؤتمرات الفيديو Hangout		

الفصول الدراسية Classroom		
تطبيق المواقع Sites		
اليوتيوب YouTube		

٢٢) هل حصلت على أي تدريب رسمي، مقدم من الجامعة، حول كيفية استخدام تطبيقات قوقل Google في العمل الأكاديمي أو في مجال التدريس؟

الرجاء اختيار جميع الخيارات القابلة للتطبيق

	نعم، حصلت على تدريب في هذا التطبيق	لا؛ ولدي رغبة في معرفته	لا أذكر	لا، وليس لي رغبة فيه	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○
تطبيق النماذج Fourms	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○
المترجم Translator	○	○	○	○	○
شبكة التواصل الاجتماعي Google+	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○

تطبيق المواقع Sites	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○

٢٣) أي من التطبيقات التالية استخدمتها في **الماضي** لتطوير معرفتك بمجال تخصصك الاكاديمي؟
يمكنك اختيار أكثر من واحد

الخدمات السحابية Google Drive	المترجم Translator
تطبيق المستندات Docs	شبكة التواصل الاجتماعي Google+
تطبيق الشرائح Slides	مكالمات الفيديو Hangout
تطبيق الصفحات Sheets	الفصول الدراسية Classroom
تطبيق النماذج Fourms	تطبيق المواقع Sites
الباحث العلمي Scholar	اليوتيوب YouTube

٢٤) أي من التطبيقات التالية تستخدمها **حالياً** لتطوير معرفتك بمجال تخصصك الاكاديمي؟
يمكنك اختيار أكثر من واحد

الخدمات السحابية Google Drive	المترجم Translator
تطبيق المستندات Docs	شبكة التواصل الاجتماعي Google+
تطبيق الشرائح Slides	مكالمات الفيديو Hangout
تطبيق الصفحات Sheets	الفصول الدراسية Classroom
تطبيق النماذج Fourms	تطبيق المواقع Sites
الباحث العلمي Scholar	اليوتيوب YouTube

٢٥) أي من التطبيقات التالية استخدمتها في الماضي لتحسين مهارات التدريس لديك؟
يمكنك اختيار أكثر من واحد

الخدمات السحابية Google Drive	المترجم Translator
تطبيق المستندات Docs	شبكة التواصل الاجتماعي Google+
تطبيق الشرائح Slides	مكالمات الفيديو Hangout
تطبيق الصفحات Sheets	الفصول الدراسية Classroom
تطبيق النماذج Fourms	تطبيق المواقع Sites
الباحث العلمي Scholar	اليوتيوب YouTube

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٢٦) أي من التطبيقات التالية تستخدمها حاليا لتحسين مهارات التدريس لديك؟
يمكنك اختيار أكثر من واحد

الخدمات السحابية Google Drive	المترجم Translator
تطبيق المستندات Docs	شبكة التواصل الاجتماعي Google+
تطبيق الشرائح Slides	مكالمات الفيديو Hangout
تطبيق الصفحات Sheets	الفصول الدراسية Classroom
تطبيق النماذج Fourms	تطبيق المواقع Sites
الباحث العلمي Scholar	اليوتيوب YouTube

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٢٧) بشكل عام، ما مدى رضاك عن توفر خدمات Google الأكاديمية بجامعة بيشة، ولماذا؟

أمل توضيح الأسباب هنا (إجابة قصيرة)

راضي تماماً	
راضي إلى حدٍ ما	
لست متأكد / محايد	
غير راضي	
مستاء جداً	

(القسم الرابع)/ استخدام تطبيقات Google لتطوير المعرفة الأكاديمية ومهارات التدريس: [١٠ أسئلة]

تم تصميم هذا الجزء لجمع البيانات حول استخدام تطبيقات Google من أجل تحسين وتحديث المعرفة الأكاديمية ومهارات التدريس للتخصص الأكاديمي.

٢٨) عندما يكون لديك موضوع جديد وترغب الحصول على مزيدٍ من المعلومات حوله، فأي من تطبيقات Google التالية تستخدمها لتثقيف نفسك حول هذا الموضوع:

الرجاء اختيار جميع الخيارات القابلة للتطبيق

	دائماً	معظم الوقت	من وقت لأخر	نادراً	أبداً	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○
تطبيق النماذج Fourms	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○
شبكة التواصل الاجتماعي Google+	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○

تطبيق المواقع Sites	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○

٢٩) يرجى توضيح الأسباب التي دعتك لاختيار هذه التطبيقات لتثقيف نفسك وزيادة رصيدك العلمي حول أي موضوع الجديد؟

٣٠) هل استخدمت في الماضي أي من تطبيقات Google التالية لتبادل الأفكار العلمية أو وجهات نظر شخصية حول المواضيع ذات الصلة الأكاديمية مع الزملاء محلياً أو دولياً؟

	أبداً	أقل من مرة في الشهر	مرة كل شهر	٢-٣ مرات في الشهر	مرة كل أسبوع	٢-٣ مرات كل أسبوع	يومياً	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○	○	○
تطبيق النماذج Fourms	○	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○	○
شبكة التواصل الاجتماعي	○	○	○	○	○	○	○	○

Google+								
مكالمات الفيديو Hangout	○	○	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○	○

٣١) هل تستخدم حالياً، أي من تطبيقات Google التالية لتبادل الأفكار العلمية أو وجهات نظر شخصية حول المواضيع ذات الصلة الأكاديمية مع الزملاء محلياً أو دولياً؟

	أبداً	أقل من مرة في الشهر	مرة واحده في الشهر	٢-٣ مرات بالشهر	مرة في الأسبوع	٢-٣ مرات بالشهر	يومياً	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○	○	○
تطبيق النماذج Fourms	○	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○	○
شبكة التواصل الاجتماعي Google+	○	○	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○	○	○

الفصول الدراسية Classroom	○	○	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○	○

٣٢) هل استخدمت أي من تطبيقات Google التالية في الماضي لمناقشة المواضيع الأكاديمية ذات الصلة مع زملاء التخصص محليا أو دوليا نقاش علمي دقيق؟

	أبداً	أقل من مرة بالشهر	مرة كل شهر	٢ -٣ مرات شهرياً	مرة كل أسبوع	٢ -٣مرات بالأسبوع	يومياً	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○	○	○
تطبيق النماذج Fourms	○	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○	○
شبكة التواصل الاجتماعي Google+	○	○	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○	○	○

تطبيق المواقع Sites	○	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○	○

٣٣) هل تستخدمت حالياً أي من تطبيقات Google التالية لمناقشة المواضيع الأكاديمية ذات الصلة مع زملاء التخصص محليا أو دوليا نقاش علمي دقيق؟

	أبداً	أقل من مرة في الشهر	مرة كل شهر	٢-٣ مرات في الشهر	مرة كل أسبوع	٢-٣مرات كل أسبوع	يومياً	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○	○	○
تطبيق النماذج Forums	○	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○	○
موقع التواصل الاجتماعي Google+	○	○	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○	○

٣٤) آمل توضيح أسباب استخدامك لتلك التطبيقات لمناقشة المواضيع الأكاديمية ذات الصلة مع زملاء التخصص محليا أو دوليا:

٣٥) هل تتفاعل مع زملاء التخصص محليا أو دوليا عند طلبهم آراء وخبرة المختصين في موضوع أكاديمي عن طريق استخدام أي من تطبيقات Google التالية؟

	أبداً	أقل من مرة بالشهر	مرة	٢-٣ مرات	مرة	٢-٣ مرتين	يومياً	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○	○	○
تطبيق النماذج Forums	○	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○	○
موقع التواصل الاجتماعي Google+	○	○	○	○	○	○	○	○

مكالمات الفيديو Hangout	○	○	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○	○

٣٦) ما هو التطبيق الغير مفيد من وجهة نظرك في القائمة التالية من تطبيقات Google، ولماذا؟
يمكنك اختيار أكثر من تطبيق

	أدخل (*) هنا	السبب
الخدمات السحابية Google Drive		
تطبيق المستندات Docs		
تطبيق الشرائح Slides		
تطبيق الصفحات Sheets		
تطبيق النماذج Forums		
الباحث العلمي Scholar		
المترجم Translator		
موقع التواصل الاجتماعي Google+		
مكالمات الفيديو Hangout		
الفصول الدراسية Classroom		
تطبيق المواقع Sites		

اليوتيوب YouTube

٣٧) بشكل عام، ما مدى رضاك عن مستوى التطور الذي حصلت عليه شخصياً من تطبيقات Google؟

راض جداً	راض إلى حد ما	محايد (غير راضٍ، وغير مستاء)	مستاء إلى حد ما	مستاء جداً

ماهي الأسباب التي ساعدتك أو أعاقتك دون الوصول للمستوى المرغوب في استخدام تطبيقات Google؟

(القسم الخامس) استخدام تطبيقات Google في تحسين مهارات التدريس: **[6 الأسئلة]**

تم تصميم هذا الجزء لجمع البيانات حول استخدام تطبيقات Google لتحسين مهارات التدريس لمادة التخصص

٣٨) هل استخدمت أي من تطبيقات Google التالي في محاضراتك للمشاركة والتفاعل مع طلابك، أو مناقشة مواضيع ذات صلة بالمادة العلمية؟

إذا كانت الإجابة (نعم) يرجى تحديدها، إذا كانت الإجابة بـ(لا)، انتقل إلى السؤال التالي:

	أبداً	أقل من مرة بالشهر	مرة	٢-٣ مرات	مرة	٢-٣ مرتين	يومياً	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○	○	○

تطبيق الشرائح Slides	○	○	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○	○	○
تطبيق النماذج Forums	○	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○	○
موقع التواصل الاجتماعي Google+	○	○	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○	○

٣٩) يرجى بيان الأسباب التي منعتك من استخدام هذه التطبيقات مع هذا المقرر الدراسي؟

٤٠) هل سبق لك أن أحلت طلابك للرجوع إلى أي من تطبيقات Google التالية (للإستزادة من، الرد على، أو مناقشة) محتوى ذا صلة بمقرر المادة الدراسية؟

	غير	٣-٢	أقل من

	أبداً	مرة في الشهر	مرة كل شهر	مرات شهرياً	مرة كل أسبوع	٢-٣ كل أسبوع	يومياً	قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○	○	○
تطبيق النماذج Forums	○	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○	○
موقع التواصل الاجتماعي Google+	○	○	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○	○

٤١) هل يتم استخدام أو دمج أياً من تطبيقات Google التالية في اختبارات الطلاب أو تقييم تحصيلهم الأكاديمي بأي شكل من الأشكال؟

	أبداً	أقل من مرة بالشهر	مرة	بالشهر	بالشهر	بالأسبوع	في الأسبوع	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○	○	○

تطبيق المستندات Docs	○	○	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○	○	○
تطبيق النماذج Forums	○	○	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○	○	○
موقع التواصل الاجتماعي Google+	○	○	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○	○	○

٤٢) حدد مستواك المهاري (المهارات) في إنشاء محتوى تعليمي في تطبيقات Google التالية:

	خبير	فوق المتوسط	متوسط	مبتدئ	غير قادر	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○

	مرتفع جداً	جيد	متوسط	لا بأس به	لا يستحق الذكر	غير قابل للتطبيق
تطبيق الصفحات Sheets	○	○	○	○	○	○
تطبيق النماذج Forums	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○
المترجم Translator	○	○	○	○	○	○
موقع التواصل الاجتماعي Google+	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○

٤٣) كيف ساعدت تطبيقات Google على تحسين الكفاءة والإنتاجية وغيرها من عمليات التدريس لديك داخل قاعة التدريس؟

	مرتفع جداً	جيد	متوسط	لا بأس به	لا يستحق الذكر	غير قابل للتطبيق
الخدمات السحابية Google Drive	○	○	○	○	○	○
تطبيق المستندات Docs	○	○	○	○	○	○
تطبيق الشرائح Slides	○	○	○	○	○	○
تطبيق الصفحات Sheets	○	○	○	○	○	○
تطبيق النماذج Forums	○	○	○	○	○	○
الباحث العلمي Scholar	○	○	○	○	○	○

المترجم Translator	○	○	○	○	○	○
موقع التواصل الاجتماعي Google+	○	○	○	○	○	○
مكالمات الفيديو Hangout	○	○	○	○	○	○
الفصول الدراسية Classroom	○	○	○	○	○	○
تطبيق المواقع Sites	○	○	○	○	○	○
اليوتيوب YouTube	○	○	○	○	○	○

٤٤) آمل إضافة أي تعليقات أو ملاحظات ترى ضرورتها وترغب في ذكرها لم يتم التطرق لها في هذه الدراسة

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Appendix H: EMAIL STATEMENT SENT TO THE UoB

IRB#095915B3X Exempt Review

English Participants Email	رسالة المشاركون باللغة العربية
Greeting Thank you for your acceptance to participate in this study, which would help raise the academic performance of faculty members at King Khalid University particularly, and faculty members in higher education in general. Please have couple minutes to fill in the following electronic questionnaire by going to the link: www.computing.wayne.edu/qualtrics/ The questionnaire is set up in English by default, but you can choose Arabic if you prefer to. Thank you again with much appreciation. The Researcher: Bandar Alshihri	السلام عليكم ورحمة الله وبركاته تحية طيبة وبعد أشكر لكم موافقتكم بالمشاركة في هذه الدراسة التي من شأنها أن تسهم في الارتقاء بالأداء الأكاديمي لأعضاء هيئة التدريس بجامعة الملك خالد خاصة، وأعضاء هيئة التدريس في التعليم العالي بشكل عام. آمل تلطف سعادتكم بتعبئة الاستبانة الإلكترونية التالية من خلال الدخول على الرابط www.computing.wayne.edu/qualtrics/ **تم ضبط الاستبانة على اللغة الإنجليزية كلغة افتراضية، ولكن بإمكانك اختيار اللغة العربية كلغة مفضلة للإجابة.** **ولكم وافر الشكر مرة أخرى وجزيل التقدير** **الباحث: بندر الشهري**

Appendix I: BLACKBOARD ANNOUNCEMENT

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DISSERTATION ABSTRACT

USING GOOGLE APPLICATIONS AS PART OF CLOUD COMPUTING TO IMPROVE KNOWLEDGE AND TEACHING SKILLS OF FACULTY MEMBERS AT THE UNIVERSITY OF BISHA, BISHA, SAUDI ARABIA

by

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May 2017

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Cloud computing is a recent computing paradigm that has been integrated into the educational system. It provides numerous opportunities for delivering a variety of computing services in a way that has not been experienced before. The Google Company is among the top business companies that afford their cloud services by launching a number of business and educational Apps. Google runs these Apps for free to be used for educational purposes, which saves a huge amount of expense for institutions and allows them to direct scarce financial resources to other areas of need. King Khalid University (KKU) was the first and only Saudi university since 2012 that officially offered Google Apps to its faculty members, staff, and students.

The University of Bisha, a new independent university that was separated from KKU, became the second university that owns Google Apps as part of its academic services. This gives The UoB a distinctive opportunity and a unique reason for using Google products and learning from the experience. This research focuses on how The UoB faculty members take advantage of these Apps' benefits in terms of improving their academic and professional knowledge in their

discipline as well as improving their teaching expertise within the Constructivist philosophy, methodologies, and traditions. The literature review provides an overview of the essential sources which support this research.

The research focused on The UoB academic instructors in order to study their behavior and potential problems and issues they experience in employing Google Apps to improve teaching, organization, academic collaboration, self-education, and other educational purposes. Precisely, it addresses the following questions:

- In what way are the instructors' views at The UoB about using Google Apps influencing subject matter and teaching improvement?
- What issues - positive or negative- do The UoB faculty members have regarding the varieties of Cloud computing and, specifically, Google Academic Applications?
- What are The UoB instructors' experiences in using Google Academic Apps in higher education?

The instrument in both English and Arabic was sent to 673 members. Only 131 contributors participated fully. The instrument consists 44 questions in five sections; both closed and open-ended questions were used. The instrument was piloted by eight experts and it has both face and content validity.

The study showed that multiple and various levels of knowledge and specific skills may significantly affect the ability of the members of the faculty and academic staff to apply the benefits of using Google services/ tools in their professional activities. Lacks of experience, tool awareness and effectiveness in using Google services may result in lower confidence and trust in Google products, as well as disappointment, and the formation of biased negative opinion regarding usefulness of these applications for academic users within the university environment.

There are limitations to this study. For example, a lengthy instrument; unclear meaning of some questions because of dual English and Arabic translations; distribution of survey during exam time; fear some faculty in smaller departments being disciplined for the answers they provide, among others.

The results point out the need of disseminate the awareness of modern teaching methods and theories between faculty more often; training and faculty workshops in the use of Google Apps; team development activities in collaborative teaching; and designing an online course in Arabic Language and make it available for both members and students 24/7; integrating Google suite into academic meetings and other services in order to increase faculty's collaboration and productivity. Finally, the study provides related recommendations for future research.

AUTOBIOGRAPHICAL STATEMENT

Academic Education:

- ***PhD (Doctor of Philosophy)*** Learning Design and Technology, Wayne State University, Detroit, Michigan, USA (2017)
- ***Microsoft Teacher Academy: Office 365 USA*** *(2017)*
- ***Certified Microsoft Innovative Educator MIE,*** *USA (2017)*
- ***Apple Certified Teacher,*** USA. (2016)
- ***Graduate Certificate in College and University Teaching*** Wayne States University, Detroit, Michigan, USA (2015)
- ***MA (Educational Technology and Resources)*** King Saud University, Riyadh, Saudi Arabia (2007)
- ***B.S. (Bachelor of Elementary Education)*** Bisha Teachers' College, Bisha, Saudi Arabia (1999)

Professional Memberships:

- Member of Michigan Association for Computer Users in Learning (MACUL).
- Professional Member of the ATD Association for Talent Development (known formerly as American Society for Training and Development ASTD).
- Member of the International Society for Performance Improvement (ISPI).
- Member of the Association for Educational Communication and Technology (AECT).
- Member of The Golden Key International Honour Society.

Work Experiences:

- Director of the Administration of King Khalid University Colleges in Bisha *2007- 2009.*
- Supervisor at Students Affairs Department in the Ministry of Education Deputyship for Teachers' Colleges 2005-2007
- Director of the Students Activities Department, Bisha Teachers' College *2003-2004*

Other Professional Experiences:

- Member of KRA (Karate Referee Association), USA, Michigan, 2016
- Member of Wu Shi Dao Street Defence, UK. 2015
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